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BLOODED STOCK



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Vol. XIV MARCH 1908 No. 1

Published by Black Co. Eng.

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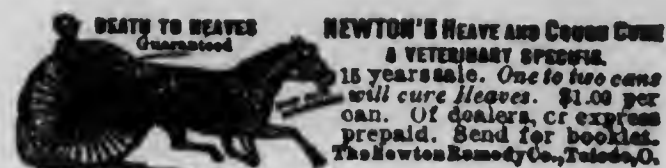
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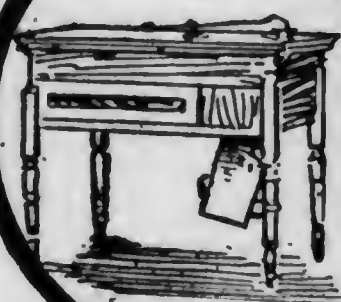
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MARCH

BLOODED STOCK

For Practical Stock Breeders and Feeders
Published on the Twenty-fifth of each month
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Clubbing offers will be found on another page.

BLOODED STOCK for March—1908.

Page Three

TO OUR PATRONS

HAVE YOU SPOKEN to your friends and neighbors about taking Blooded Stock for the coming year? If you have not, please do so for us and tell them about the new department we have started to answer all questions that our paid subscribers may ask us direct by mail. This is proving a great success and we are glad to have some place where we can obtain information such as is desired from time to time. While this makes us a great amount of extra work, yet we feel that a paper should be a source of information to its subscribers, and it is not possible to give all the information that applies to the different subjects that readers may be interested in. Please take this matter up at once and see that as many of your friends get Blooded Stock as possible. Have them send in their subscriptions at once. You can guarantee them that the paper will stop when their paid subscription is out, unless they renew.

THE NEW POST-OFFICE RULING makes change in business policy of Blooded Stock necessary. Read carefully. Order No. 907 of the Postoffice Department at Washington says: "A reasonable time will be allowed publishers to secure renewals of subscriptions, but unless subscriptions are expressly renewed, after the term for which they are paid (monthlies within 4 months) they shall not be counted in the legitimate list of subscribers, and copies mailed on account thereof shall only be accepted for mailing at the second-class postage rate of one cent for each four ounces or fraction thereof, prepaid by stamps affixed. The right of a publisher to extend credit for subscriptions is not denied or questioned, but this compliance or non-compliance with this regulation will be taken into consideration in determining whether the publication is entitled to transmission at the second-class postage rates."

YOUR PRINTING is a matter that we would be glad to have you consult us about. Every printing office in the country can do a certain line of printing, but it is the printing that you see once in a while, that is catchy and attractive, that pays the best. The attractive catalogues, where nice designs have been used, although costing a little more to get them out, are the ones that bring the sales. This is the most profitable way one can spend money in advertising. We would be pleased to have our readers write us when they have printing to be done, stating about the quantity they can use, and we shall be glad to give them estimates. We have one of the best equipped places in the country for printing catalogues, circulars, letter heads, cards, envelopes, etc.—everything that any of our readers may need.

OUR READERS will find live stock of almost every breed advertised in the columns of Blooded Stock. When needing either cattle, horses, sheep, hogs, poultry or pet stock of any kind it would pay anyone to invest a few cents in stamps in writing to our advertisers. A vast amount of information can be gained from the catalogues and letters that these advertisers write. In fact, a person can get a good education from keeping close track of points made by the different breeders in writing descriptions of animals they have for sale. Usually some one will make a statement that is entirely new to a person, and it is by putting these points together that one learns many valuable things. This is not only true in regards to live stock breeders, but is especially so with manufacturers of farm machinery, etc., who issue catalogues brimful of information. In fact, a close study of these catalogues, one becomes well acquainted with the difference between machines of the same kind. Farmers would be better posted if they would pay more attention to the advertisers' columns of a paper than they do. We urge our readers to try this plan.

RAISING DAIRY CALVES

AMONG dairy cows the best practice is to remove the calf from the cow within 24 hours after its birth and at once teach it to drink. This separation may be delayed until the dam's milk assumes the normal condition, but as a rule, the earlier the calf is taken in hand the better it is for the calf. The younger it is the easier it learns to drink. It is also better for the dairy cow to be regularly milked by hand than to suckle a calf. The milk of good cows is often too rich for their calves and the latter are apt to take too much if left to help themselves. There is no truer thing in my experience, and I believe in that of hundreds of others, than that allowing a calf to suck is an injury to the cow. This injury is more or less permanent, according to how long it is continued. No rule can be given for quantity in feeding calves, they differ so much in size and food requirements. Judgment must be used, the feeding effects observed and the calf given enough to thrive and be active, but not too much. More calves suffer from over feeding than from scant diet. Keep the calf a little hungry and eager for more rather than fill it to dullness. The endeavor should be to prevent the beginning of indigestion which leads to scouring and perhaps fatal diarrhea. Nothing causes indigestion sooner than overfeeding or irregularity in the quantity, time and temperature of the milk especially while the calf is young, and absolute cleanliness about feeding vessels is essential, with frequent scalding. If it can with certainty be kept equally clean, some feeding device which compels the calf to suck its milk instead of swallowing rapidly is preferable to the open pail. The practice of feeding calves by means of what is termed a calf feeder is growing in popularity among the dairymen, writes J. Fletcher in the *Indiana Farmer*. This is a pail arranged with a loose fitting top and a rubber tent upon the top of it which is connected with a tube having a simple valve at the lower end which lies in the bottom of the pail. The objection of a calf drinking from the pail is that by this means no saliva of any account is mixed with the milk. The effect of this fluid in aiding digestion is well known, and it is a fact also well known that calves fatten much more rapidly and better, as a rule, upon the cow than upon the pail even if they get a pail full of new milk fresh and warm from their dams morning and night. A good many calves

become pot-bellied by drinking too rapidly. I am certain that skimmed milk taken slowly by the operation of sucking will prove of more real benefit to calf than to drink it rapidly. The increased use of milk separators in the dairy sections of the country has resulted in greater attention being paid to raising calves on skimmed milk. It is well settled at this time that practically as large, strong and vigorous calves can be grown on skimmed milk, supplemented by some suitable grain feed as on whole milk providing they are properly fed and cared for. There is no question but that whole milk is the normal food for calves, and when the cream or butter-fat is removed it becomes necessary to replace it in the calf ration with some equivalent but cheaper form of feed.

The calf here referred to is not supposed to be for veal but to be raised for a dairy cow.

The foregoing treatment should be accompanied by early lessons inducing it to eat sweet hay and a little grain. The sooner it learns to eat hay and the more it eats, the better, but keep up milk feeding as long as possible, if only once a day. Grain should be used, oats, bran and a little linseed to judiciously supplement the other food. Do not turn it on to grass too soon. A fall calf will be in good shape to get its living from pasture the first summer. Fall calves are generally better cared for, thrive better and make better calves than those dropped in the spring. Our aim should be to produce a cow with a large capacity for consuming and digesting rough fodders. Clover and alfalfa is the best food known of for this purpose and we cannot get the calves to eat it too young. From this point to the breeding time we should aim to make the animal grow rapidly without putting on too much fat. It is well to breed the heifer so she will drop her first calf at from two to two and a half years of age. During the first milking period feed the heifer well. Remember she is not through growing yet, and part of her food must go to building up her frame. The heifer may not give a paying quantity of milk the first year, but this should not deter us from milking her for another year. We must remember that we are establishing character to the heifer, and whatever we teach her to do during the first year of her milking life she will be likely to do the remainder of her life. Long milking is a habit.

Breeding and Feeding for the Dairy Type

IT has come about in the economic conditions of American living especially, that the growth of the consumption of dairy products has been uninterrupted and remarkable in its volume. So great, so expanding has been this growth that students of agricultural development now regard dairying as one of the most important branches of agriculture, as it is one of the most remunerative because when successfully conducted requiring a higher order of skill and a wider knowledge of the laws and forces of nature and in the use and subservience of them to specific purposes than any other line of farming. Good dairying is a science and as yet is so very new that one at all careful in his statements would not think of calling it an exact science. Indeed it probably will never be reduced to the point of even comparative exactness, especially in the line of animal breeding and nutrition. It is only the newly taught, the inexperienced or the very wise young man who will have the hardihood to say positively it is thus and so absolutely in animal life. We who are older in farm animal biological mistakes move more cautiously, and are not so much blazing the way that others may follow our lead but perhaps in case we desire to do so, that we may gracefully ourselves get back.

I trust I make no mistake in thus frankly taking you into my confidence by the inferential acknowledgment I have made that there are many things connected with my subject that I cannot give you an authoritative opinion upon. If I have made the mistake I throw myself upon your mercy and submit that those among you, with myself, who know not and know we know not all about the cow can very profitably spend a short time together in discussing such questions that naturally arise regarding the dairy cow. And such as I have I freely give unto you. The title of this discussion pre-supposes that there is a dairy

type, that there is a best type of cows for the dairyman, in contradistinction to a type sought for by, and serving the best purpose of the beef man.

Naturally right here a special purpose dairy cow man might be expected to pay his compliments to that dairy delusion known as the dual purpose cow—the one that will make profitable milk all through her life and good, salable beef when her milking usefulness is over. I grant that such a cow would be of inestimable value to the average dairyman, but I cannot encourage the hope any one may entertain of her ever being evolved into a breed fact. Evidently the people who think they can find that breed of cows or make it, want that kind and we can dismiss them with our best wishes. All cows in a given environment were very much alike in their characteristics and tendencies as long as they were in their wild or native state. Improvement only began when men brought them under dominion. No real progress was ever made toward breed improvement until man became a factor in the evolution towards some ideal. The birds in the trees, the rabbits, the squirrels, are the same size and of the same habits as in the days of our grandparents. The robin has the same size, the same plumage, the same too-early four o'clock note for my little boy as it had for my father when he was a boy.

Perhaps of all our wild animals the bear has developed most in stature and importance—especially those that get away.

The same may be said of the fishes, for while the old saw has it that "There are as good fish in the sea as ever were caught," those of us who must listen to tales of piscatorial sport know there is a great tribe of fishes always smart enough to jump the hook; but we observe that the silly ones that get caught run about the same sizes our

fathers brought home when we were boys. So, the better cow waited for man. In her native state she and her consort were both survivors of the physically fittest. They were fleet of foot and alert to guard against and ward off danger. The cow became a mother and from such scant and uncertain living as she could gather made the milk till her offspring could shift for himself in his individual struggle for his own survival.

Of course we do not know, but we can easily imagine that improvement of breed was begun by man taking the cow and learning (some men have not learned it yet) that she gave more milk when she had more feed. Then no doubt her daughter, under the influence of a quieter life and fuller feeding, was a milking improvement upon the mother; and some daughters more of improvements than others. The majestic "head of the herd" of course scorned domesticity and spurned it, and maintained his wild dominion on the hills, till some successor grew robust enough to depose him.

No doubt now and then in a hazy sort of a way these early breeders wondered that the superior cow did not always give in her female offspring a superior cow also. They did not take into account the prepotent, masterful worthlessness of the sire that came down from the hills. And it was no shame for these early breeders that they knew no better, for they had no Hoard nor professors to teach them; but what shall we say of the breeders of the present day who have Moses and the prophets and have not learned that improvement is impossible with the scrub sire, come he from the hill or the valley?

We do not know to what extent these pioneer breeders practiced inbreeding but we can imagine they followed it, under their methods, too closely until they saw its evil effects and then they flew off in a tangent from it, for we notice in our lineal descendants, the breeders of the present day scrubs, a horror of the practice of inbreeding. Now, inbreeding in itself is not to be condemned as beyond excuse for being done, for in breed improvement it is one of the most important agencies at our command, when used wisely and in connection with favorable environment and rational continuous good feeding.

We cannot discuss the cow from a single outlook. We cannot make her by breeding alone. If we try to do that then certainly close in-breeding becomes the forerunner of disappointment and disaster. We cannot ignore breeding and depend upon environment in our development of the dairy cow. We cannot say there is nothing at all to be considered but feed, and bring forth our ideal cow from our skill and knowledge in compounding and feeding a balanced ration. We cannot dissect the cow and put a value upon this, that, or the other influence contributing to her production.

First we must have in mind what to us means dairy type. After we have fixed that well in mind and have a proper realization of the fact that to secure this type means probably a large part of a man's years, and to have a stock of patience, industry and hope we may consider ourselves in good shape to breed our dairy cow.

When we fully realize the length of the work we undertake, when we know we will make many mistakes and that "the best laid plans of mice and men gang aft a-gley," only then will we have a proper conception of the absolute and utter folly of trying to work improvement by crossing breeds, as for instance cross the Holstein on the Guernsey, with the hope of getting in the issue a cow that will yield the Holstein quantity and the Guernsey quality.

The first breed improvement must have been accomplished by fixing as a prepotent characteristic certain traits in a strain or a family. The reason the first breeders made no progress in producing great milk cows was because of lack of merit in the sire, and lack, also, of prepotent ability on his part of impressing such merit as he may have possessed on his offspring; and I can think of no way in which this prepotency can have been secured but by the practice of in-breeding—breeding a type selected male back to his dam, and then breeding the type selected female offspring back to her sire, and from that mating or a series of such matings choosing, when nearing maturity, a type of male progeny to use in service with sisters and half-sisters, tentatively, and freely with near and remote cousins. It is impossible here and with such time as I think you will allow me to take up to this aspect of the breeding question and follow it into some of its important ramifications, but I may add that a great deal of the primary work here briefly outlined may be saved the beginner in breeding if he shall intelligently take up the work at the point to which some of our most careful and conscientious breeders have brought it. Thus he will save himself both time and trouble. All over the country are

well established herds of different dairy breeds and from these he can safely make his selections.

The calf that is to be a good dairy cow certainly has a right to be well born—to be bred with an unquestionably strong dairy record as an inheritance. If the breeder is fortunate enough to own or to be able to acquire meritorious cows of pure blood, carrying strains of high producing capacity, and will use a male of rich inheritance from great sires and dams—not great in the show ring, but in the work of the dairy—to such a man if he have even ordinary gumption, breeding dairy type animals is a work easy of accomplishment.

But the other man, the one who has not things so ready made to his hand, building up the dairy herd is not so easy as it may often look. It is this man, this representative of the great American class of farmers, who is eating his bread in the sweat of his face, who can ill afford to make mistakes, this average, struggling, brave-hearted burden bearer that we should have concern that any message that is sent may reach.

His cows may be a bunch—a job lot—carrying their unwritten pedigrees back to the watering places—breeding operations of the patient Job—and, giving credit where it is due, I may say in passing, that Jacob was probably the first extensive breeder to make a practical application of one of the elements that in breeding operations we now name environment.

To the man with this assortment of unknowable cows I have heard the advice sometimes given to sell the whole lot and invest the proceeds in so many good cows as the sum will buy. Now buying cows is one of the very last ways in the world to get good ones. My advice to such a man would be to get into shape to feed those cows a good full ration for a whole year.

I do not know how it is with the brethren, but for myself I'll admit I am not smart enough to tell the worth of a cow by looking at her. They say the only way to know a woman is to live with her, and it is pretty much the same with cows. She may be better than she looks. Then again she may be worse than she looks. As soon as you see some cows you know they should have been steers. It is a waste of time and labor to fool with them. Get rid of them as quickly as possible—they will take the bread out of your mouth; but the more promising ones may surprise you after you have fed them well for about a year and lived with them.

Put them to the test of the scale and the Babcock. Shelter them from storms; be kind to them; in addition to feeding them abundantly do it regularly; don't forget the round year full ration—don't try to fool them on a short, dry pasture by piping them the tune, "Consider, old cow, consider." Better use the up-to-date version—"Corn fodder, old cow, corn fodder."

If a scrub bull is used to head the herd, make him walk the chalk to the butcher, and in his place put the best bull you can buy from the breed of your choice of dairy breeds. Feed and care for him right and it is likely he will not disappoint you. If at maturity he proves his worth keep him in use for as many years as possible and until his successor has given proof of his right to the succession. If a matured bull can be bought at the start, and "his papers fit" him, as my friend Collingwood loves to say, so much the better.

Then you have begun to breed for dairy type. The functions of the dairy cow are three: from the food she eats she must maintain her physical well-being, nourish and develop her unborn, and generally furnish milk for her master—what a wonderful creature is the good cow!

There is a limit to the cow's ability to eat, digest and assimilate food, and unless the quantity be full, some function, or perhaps all her functions, will lag; if the quality be lacking from the full quantity she goes under-nourished. It is pretty well settled in our conception of cow nutrition that the medium cow must have at least two pounds of digestible protein a day. Nature is never lavish with protein in corn stover, timothy hay and oats, straw, huckleberry bushes and rag weeds, and there is no cow living that does not eat enough of such provender to extract therefrom her complement of digestible protein; and I can assure you the man who is breeding for dairy type and thus underfeeding the cow to be mother of the future cow is feeding for his own disappointment and nullifying the inheritance that should be the birthright of the future cow from her prepotent sire.

But assuming that the calf has been bred right and has been strongly born, it then passes into the hands of the breeder to carry on the work. "All flesh is grass," it has been written. After being well born all calf, heifer, cow is care and feed. At this stage comes in the necessity of

wisdom and patience. All good looking calves do not make good cows. Dairy progress is not bewilderingly rapid and often the way of the progressor is hard.

It is supposed this calf carries the dairy type inheritance from its sire. In the sire the type was established and encouraged largely by environment and feed, and these two forces must be operative in encouraging a proper development of the dairy tendency in the offspring. Consequently the calf and the heifer must be fed with the dairy type in view. One popular conception of the dairy type is a thin skin drawn over the skeleton of a cow, but I say unto you no man has ever yet starved dairy qualities into a calf or cow, and it is not worth the beginner's while to make the experiment. But many a good cow has been starved into mediocrity by the stinginess or ignorance of her feeder. In the matter of a little more or less fat on the heifer or the cow I may quote—"Better the excess than the deficiency."

It is well to remember that the same character of feed that will encourage the cow into well doing as a milker is the kind that will develop the heifer into a cow.

As I have said, if she is big enough to become a mother, at two years or less of age, have her bred back to her own strong sire. Then in feeding the pregnant dairy heifer remember she must make growth, also, and withhold not the abundant and well formed ration. At this time remember, further, that this young thing is performing one of the most wonderful and beautiful marvels of the universe—working out the design of maternity—taking on the obligations of motherhood, and she is in your hands where I will wish you both well and leave her.

Good Roads and Farm Values.

The direct connection between good roads and the value of farm land is shown in a striking manner in Bulletin No. 38 of the U. S. Department of Agriculture. This Bulletin gives the results of an investigation by the Office of Public Roads of that Department relating to public road mileage and revenues, improved roads, and expenditures in the United States in the year 1904, and the information contained therein is of great importance in connection with the movement on behalf of the systematic improvement of the public highways.

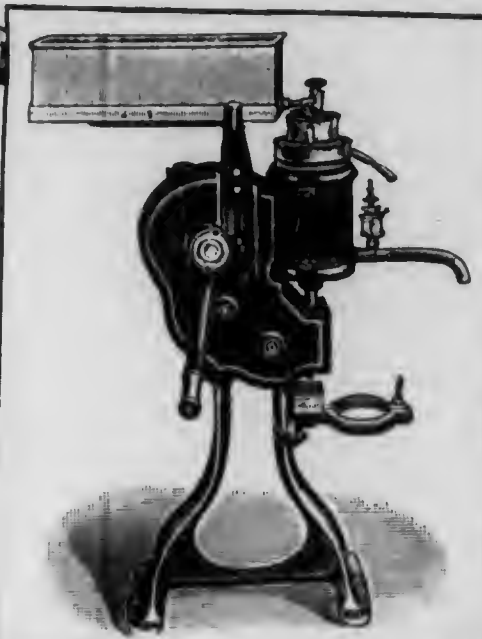
The returns from various States show that in nearly every case the States having the highest percentage of improved roads have the largest population per mile of road, thus showing that better roads are a powerful factor in encouraging the settlement of unused lands, especially in sparsely populated sections of the country. Good roads are also an important influence in retaining in the farming districts the desirable elements who might otherwise drift into the towns and cities. As the price of farm land depends on their productivity, accessibility to markets, and population engaged, or desiring to engage, in agricultural pursuits, it follows that road improvement, by attracting additional settlers, and giving them better facilities for reaching their markets, directly tends to increase the values of all farm lands

within the radius of the roads improved. A comparison of the percentage of improved roads of the various States shows that the average percentage of the improved roads in all States where farm land is worth less than \$20.00 per acre, is only 1.9 per cent, whereas in the States where the acreage value is more than \$20.00, improved roads constitute an average of 9 per cent of the total mileage.

While there may be minor causes of variations in the value of farm lands it is an undoubted fact that as a general rule the higher values of certain States are largely due to their superior roads. Records on file in the Office of Public Roads show that farm lands have been known to advance in value from 50 to 500 per cent on account of the improvement of the roads connecting them with market towns.

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both in construction and efficiency—increasing their already unequalled ability to handle milk most easily, quickly, profitably. Remember: you are buying a cream separator first of all to get all the cream—all the money—out of your milk and the U. S. Cream Separator continues to

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for fifty consecutive runs, in competition with the leading makes of separators of the world. This record has never been equaled. Furthermore: the past sixteen years have conclusively demonstrated the durability and the unequalled reliability of the U. S. Dairymen to-day buy the U. S. because they know it will do for them the best work for the longest time. Competing separators "claim" anything and everything, truthful and otherwise, but the real superiority of the United States Cream Separator has been so thoroughly established in every way, that no one can successfully dispute it. This is so widely known and acknowledged nowadays that dairymen in all parts of the country are rapidly exchanging their old style, unsatisfactory, "cheap" and unreliable separators for the clean-skimming, STANDARD and reliable U. S.

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Model and highest award at the Jamestown Exposition. All tight all over, keeps ensilage absolutely sweet. The doors are continuous, easily handled, and have no clumsy rods. A sufficient number of strong, well supported hoops form a permanent, safe ladder. Economy Silos are strongly built and easily put up. Fully guaranteed. Write today for free illustrated catalogue with experience of users.

Economy Silo & Tank Co.
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Canadian Experiments With Muslin Curtain Ventilation.

It will be of practical interest to your many readers to know some of the results of a preliminary trial of muslin screen ventilation being conducted by Professor J. H. Grisdale of the Central Experiment Farm, Ottawa, Canada, and reported by him in the Farmer's Advocate of January 30th, 1908. His experiments are conducted in a well built stable 100 by 25 feet with 10 feet ceiling in which 37 head of one and two-year-old steers were housed. The stable is provided with 18 windows 2.5 by 4 feet, 18 inches below ceiling, hinged at the bottom, opening at an angle of 60 degrees, so that air entering is directly upward toward the ceiling. The whole of each window, five on one side and four on the other, was covered with cheese cloth, the other nine, five on one side and four on the other were likewise wholly covered with the cheapest grade of grey cotton, costing six or seven cents a yard. The stable is therefore provided with 189 square feet of muslin, nearly five square feet per head for yearling and two-year-old steers. Professor Grisdale says:

"The experiment has been under way for a month or more and has been most interesting. For instance, during a few warm days when the thermometer showed 40 degrees F. outside and there was no breeze blowing the inside thermometer showed 82 degrees F. in spite of the fact that every curtained window (18 windows, 2.5 by 4 feet) was open. As soon as the doors were opened, however, the temperature began to fall and in a short time the thermometer showed only a few degrees more heat than outside."

Professor Grisdale then gives a series of tables in which he records the temperature of the open air, the temperature of a cow stable, ventilated by another method, the temperature of the steer stable and the wind movement, with various remarks. It should be said that the steer stable he describes is also well ventilated by another method, but that this was closed when the muslin screens were in use. The muslin screen being applied on the outside of the windows, it was possible to use either system at will, says F. H. King in Hoard's Dairyman.

His tables show that on the average for six days when the mean outside temperature was 22.6 degrees F., the muslin screen ventilated stable had a mean temperature of 51.6 degrees and the other stable 49.8 degrees, the highest and lowest outside temperatures were 36 degrees and 2 degrees, while the highest and lowest for the muslin screened stable were 62 degrees and 36 degrees, those of the other stable being 53 degrees and 46 degrees. There is thus a less uniform temperature in the muslin ventilated stable.

On December 26, when the 5 a. m. temperature outside was 18 degrees and a breeze was blowing, the muslin screened stable had a temperature of 36 degrees, and the other stable 47 degrees. The windows were then closed on one side and at 9 a. m. the wind became light, the outside temperature 8 degrees, the muslin screened stable 42 and 47 degrees. At noon



IMPROVED IN EVERY FEATURE.

Have you seen and examined the New and Improved 1908 DE LAVAL Cream Separators? If not, and you own one or more cows don't further hinder your best interests by delaying longer but let us give you a free demonstration in your own home at once. You will marvel at the mechanical perfection, the wonderful simplicity and convenience of these new machines. These new machines show improvements in every feature, from the supply can to the base of the machine, and mark the greatest move forward in separator construction since the invention of the first practical separator by Dr. De Laval in 1878. If you have milk cows you cannot afford to be without one. The new De Laval skims closer, has greater capacity, operates easier and is more ideal in every way than De Laval machines have been even in the past. The improved De Laval is actually ten years in advance of any other separator made to-day. There are ten new styles, ten new capacities and ten new prices. There is a machine for every dairy, from the smallest to the largest and at a price that will fit every pocket. Don't regret later that you didn't see the De Laval before you bought a machine but write us to-day for our handsome new catalogue describing the machines in detail and a free demonstration in your own home. You will be surprised. Don't delay.

THE DE LAVAL SEPARATOR CO.

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the wind became calm and the windows were all opened at 5 p. m. At 11 p. m. the muslin screened stable had acquired a temperature of 62 degrees and is described as "full of fog and dripping wet," while the other stable had a temperature of 47 degrees and the outside air was at 2 degrees.

Prof. Grisdale closes his preliminary report as follows:

"In favor of the system it may be said:

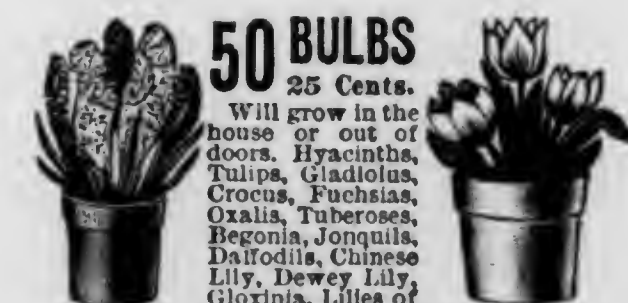
1. That, with the exercise of much care, it is possible to ventilate by means of cotton or muslin over windows or other opening; and that, of the two, cheese cloth is to be preferred to gray cotton, since a smaller area will do the work and do it better.

2. That it is cheaply installed, and much better than no ventilation.

The objections appear to be:

1. Very great watchfulness necessary to insure a fair measure of success.
2. Danger of too great a fall or rise of temperature in the night, due to rise or fall of wind.
3. Darkening of stable, due to presence of muslin on windows, which render stable somewhat gloomy and damp.
4. The fouling of muslin on account of changing directions of air

currents, permitting foul air to escape, and so the curtains soon get muddy in appearance and unsanitary in condition."



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Will grow in the house or out of doors. Hyacinths, Tulips, Gladioli, Crocus, Fuchsias, Oxalis, Tuberoses, Begonia, Jonquils, Daffodils, Chinese Lily, Dewey Lily, Gloriosa, Lilies of the Valley—all postpaid, 25c. in stamps or coin. As a premium with these bulbs we will send FREE a big collection of flower seeds—over 200 kinds, and a fine collection of Souvenir Postal Cards.

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Northern Grown and of strongest vitality. We invite you to get government tests on our samples. THE J. E. WING & BROS. SEED CO. Box 332, Mechanicsburg, Ohio

DOES IT PAY TO KEEP BLOODED STOCK?

Charles Arthur Carlisle, of the Studebaker Bros. Mfg. Co., of South Bend, Indiana, made a vigorous appeal to the farmers of the St. Joseph Valley, in Northern Indiana, on Tuesday, February 4th. Mr. Carlisle divided his address into several questions, embracing the following:

First—Does it pay the farmer to keep blooded stock? Under this head an effort was made to cover the entire field of cattle, including the beef and dairy type; also sheep, hogs, poultry, etc. The intrinsic as well as the artistic value of high bred stock and the practical influence in developing the highest efficiency of the animal was clearly brought out in the effort to interest the farmer in systematically undertaking to bring up to the highest possible standard all that he undertakes to develop. Records of recent sales of cattle, sheep and hogs, such as that at Disko, Ind., on last New Year's day, when 115 head of Poland China pigs sold for \$29,222.50, an average of \$254.10; and recent sales of Berkshires, Chester Whites, Duroc Jerseys and other pure breeds of pigs; the records of sales of fat stock at the recent Live Stock Show in Chicago, the fine sales of pure bred Guernseys at Madison, N. J., and of registered Jerseys at Lowell, Mass., and elsewhere, all of equal interest, were presented in evidence of what others are doing and what others can do. Mr. Carlisle maintains that pure bred stock has a wonderful stimulating influence in developing a keener interest for the boy and the man on the farm, and develops better care, more careful handling, judicious mating, and results in greater profits, pleasure and pride.

Second—Does it pay the farmer to study modern farm science? Under this head, the selecting of seed, planting, cultivating and harvesting of crops; the care of the soil and the feeding of stock on a balanced ration; care of buildings and sanitary methods, were part of the arguments covered in arriving at the conclusion that it "assuredly does pay the farmer to study and apply modern farm science." Mr. Carlisle placed before his large and interested audience the opinions of President Roosevelt, Secretary Wilson of the Department of Agriculture, and the editorial and personal views of a majority of the most able and advanced writers of the day. In concluding the subject Mr. Carlisle made a strong appeal to each person to subscribe at once for one or more of the leading agricultural papers, first as an evidence of good will and a desire to co-operate in the excellent educational work that such publications are doing, and second with a keen desire to learn. Learn personally what others are doing, then upon the basis of practical knowledge and observation make individual improvements as they suggest themselves. The short course and the high class work of the Agricultural Colleges, such as Purdue at Lafayette, Indiana, and the State Colleges of Iowa, Wisconsin, Nebraska, Illinois, Colorado, Michigan and Ohio, was emphasized.

Third—Does it pay the farmer to unite the force of his influence with that of his neighbor in the country

and in the town? This subject was divided into several parts. In the first the speaker developed the force of co-operation, social intercourse, improvement in community interest, and benefits of good literature. He then took up the question of modernizing the curriculum of the district, the ward and town school, so as to include modern farm science, and made an urgent appeal for teachers who had a training in this direction. In concluding, Mr. Carlisle often quoted from the address of President Roosevelt, at Lansing, Michigan, on May 31, 1907, bringing before his audience the President's thoughts upon these great questions and upon the greatest development of American manhood and American womanhood. Mr. Carlisle is an enthusiast in the development of country pure bred stock, scientific as well as sanitary methods, and devotes his leisure time to this work upon his country place near the city, but above all he takes a keen delight and great interest in every effort to improve the opportunity of the American boy and girl both in country and town.

How much are you paying the butcher for meat? Is mutton good? What does your butcher pay for the average fat sheep? If these dress out 52 to 55 per cent carcass—and the pelt is not considered—what is the carcass worth per pound? Do you pay that much per pound for stew? The stew is worth pound for pound only about one-fifth as much as the entire back and hind leg. Does it look like a square deal? Hadn't you better do your own butchering?

BLOODED STOCK for March—1908

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It contains the following "Easy-To-Use" instruments and remedies with full "Easy-To-Use" directions. Can be used successfully by the owner himself. Every time it is used the price of the Case will be saved.

Blow Needles & Silk Trocar
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If so, Your COWS are not Profitable
Don't You Think You Had Best Find Out Now What the Trouble is?

This Book Tells how to find out and how to correct the trouble. It is FREE. It was written by Dr. David Roberts, eminent Cattle Specialist, now State Veterinarian of Wisconsin. He knows, because he's studied and investigated cattle diseases for over 20 years. He knows, because he's studied and investigated all cattle diseases. He knows, because he's studied and investigated all cattle diseases. He knows, because he's studied and investigated all cattle diseases.

Fill out the coupon below and get the book now. Do not wait till your cows abort or show advanced symptoms of the disease. Do not wait even until they are sick. Apparently healthy cattle very often have the germs of Abortion in the system. That is the time to stamp it out. The book gives directions for discovering the first symptoms. The way to make your herd profitable is to stamp out all disease. The way to keep it profitable is to keep disease out. That can only be done by detecting the first appearance of the germs and giving prompt treatment. You can't begin too soon with Abortion. The germs are often in the calves and heifers, awaiting the period of gestation to attack the cow and the embryo calf. But no matter how far the disease of Abortion has advanced, we offer a

GUARANTEED TREATMENT

We guarantee to stamp out the germs of contagious Abortion in every case where Dr. Roberts' Anti-Abortion Serum is administered according to directions in "The Practical Home Veterinarian." In case of failure we return the cost of the treatment.

The treatment is so simple that a boy can give it with the best results. You want the book anyway. It gives information about all live stock, their care and treatment for all diseases.

All you have to do is to fill out the accompanying coupon and send it to us.

If you will do this at once we will also send you a 50 cent cattle journal, "The Cattle Specialist," one year free.

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BLOODED STOCK for March—1908.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS.

From Nov. 29 to Dec. 17, 1907. Unless otherwise mentioned, these records are for a period of seven consecutive days. They are made under the careful supervision of State Agricultural Colleges and Experiment Stations, and their accuracy is vouchered for by them; no private records are reported by the Holstein-Friesian Association.

During the period from November 29th to December 17th, 1907, records for 120 cows were accepted; three of which were begun more than eight months after calving. Of the 117 official records reported, three were extended to fourteen days and nine to thirty days. The averages by ages were as follows:

Thirty-four full aged cows averaged: age, 7 years, 7 months, 2 days; days from calving, 22; milk, 441.3 lbs.; per cent fat, 3.58; fat, 15,786 lbs. Nine senior four-year-olds averaged: age, 4 years, 8 months, 4 days, days from calving, 21; milk, 437.0 lbs.; per cent fat, 3.77; fat, 16,487 lbs. Eight junior four-year-olds averaged: age, 4 years, 2 months, 20 days; days from calving, 23; milk, 354.7 lbs.; per cent fat, 3.55; fat, 12,591 lbs. Ten senior three-year-olds averaged: age, 3 years, 8 months, 23 days; days from calving, 26; milk, 404.3 lbs.; per cent fat, 3.39; fat, 13,719 lbs. Eight junior three-year-olds averaged: age, 3 years, 2 months, 27 days; days from calving, 29; milk, 414.5 lbs.; per cent fat, 3.33; fat, 13,807 lbs. Eighteen senior two-year-olds averaged: age, 2 years, 9 months, 15 days; days from calving, 27; milk, 366.6 lbs.; per cent fat, 3.32; fat, 12,163 lbs. Thirty junior two-year-olds averaged: age, 2 years, 1 month, 17 days; days from calving, 31; milk, 307.0 lbs.; per cent fat, 3.31; fat, 10,17 lbs.

This herd of 117 animals of all ages, of which one-half were heifers with first or second calves, produced in seven consecutive days 44,924.7 lbs. of milk containing 1,555.527 lbs. of butter-fat; thus showing an average of 3.46 per cent fat. The average yield for each animal was 389 lbs. milk containing 13.295 lbs. of butter-fat; equivalent to 55.6 lbs or 27 quarts of milk per day, and 15½ lbs. of the best commercial butter per week.

In this issue of the official reports the aged cow class is led by Netherlands Johanna DeKol 2nd, 22,847 lbs. fat from 651.8 lbs. milk. As this cow had just completed a semi-official record for her last lactation period of 590.46 lbs. fat from 17,698.3 lbs. milk, it is evident that the semi-official test aids in development. Considering her age of past 13 years, the records made by DeKol 2nd's Alban's DeKol, 21,261 lbs. fat from 532.6 lbs. milk in seven days, 87,775 lbs. fat from 2,165.1 lbs. milk in 30 days, are remarkable; and DeKol 2nd adds another fine grand-daughter to her list. Pontiac Pauline DeKol, 20,796 lbs. fat from 506.1 lbs. milk, by her fine record gains a place in the 20-lb. class; while Parthena Ononis Paul, Mondamin Pietertje DeKol, Johanna DeKol Wit, and Albino 3rd's Clothilde Princess B., each produce between 19 and 20 lbs. fat. Minnie Beets DeKol 2nd produces above 18 lbs. fat and gains honorable mention.

Elzivere Barnum DeKol, 23.275 lbs.



THE ORIGINAL AND ONLY SPECIFIC FOR ALL TROUBLES OF BAG AND TEATS

Cows' Relief is a chemical compound especially prepared as a specific remedy for the troublesome disorders of the bag and teats. It is a specific preventive and remedy for **Caked Bag**, caused by garget, injury, over-feeding or calving; **Sore or Injured Teats**, **Spider in the Teat**, **Stricture**, **Hard Milkers**, **Cow-Pox**, and similar troubles. It goes directly to the seat of the trouble, relieves congestion, breaks up bunches that interfere with the natural flow of milk, and causes a normal milk-secretion without resorting to constitutional treatment. **Cows' Relief** relieves **Caked Bag** at once. It is a positive preventive and remedy.

For Spider in the Teat

if applied at the first sign of the trouble, and is invaluable to any dairyman or farmer for heifers with first calf, to remove the soreness and swelling that is frequently the cause of kickers and hard milkers.

"I try to keep **Cows' Relief** always on hand. For sores and swelling in cows' bags and teats it is the best thing I ever saw."

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We have hundreds of such letters. Ask your Dealer for **Cows' Relief**. If he can not supply you write to us enclosing \$1.00 for large package prepaid (enough for four or five ordinary cases), Goldline Cow Watch Charm and our FREE BOOK concerning Cow Troubles.

Your money back if you are not satisfied. Guarantee on every package. Or send us your name and one neighbor's who keeps cows, stating how many you each have, and we will send Cow Book and Charm Free while they last.

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fat from 579.1 lbs. milk in seven days, 92,184 lbs. fat from 2,294.3 lbs. milk in 30 days, not only leads the senior four-year class but also the whole list of this issue. The records are not only large in size but are also remarkable in that the average per cent. fat for both the seven and 30-day records is exactly the same, showing how constant as to its per cent fat the milk produced was. The next in this class are Buttercup Clothilde Pietertje and Vikina Johanna, with 18,563 lbs. fat and 17,915 lbs. respectively.

Bessie DeKol Abbekerk leads the senior three-year class, with 16,283 lbs. fat from 444.4 lbs. milk; and she is followed by Countess Sanesta Madonna, 16,203 lbs. fat, and Flanders Mercedes Korndyke DeKol, with 15,157 lbs. Ruth Pietertje Hartog Tweede 2nd, 15,435 lbs. fat from 433.8 lbs. milk; Dolly Douglass Korndyke DeKol, 15,305 lbs. fat from 453.9 lbs. milk, and Pauline Lieuwkije DeKol Wayne, 15,19 lbs. fat from 424 lbs. milk, lead the junior three-year class; the last heifer also having an equally good 30-day record in addition to that of seven days.

Laurel Verona Cornucopia DeKol, 16,407 lbs. fat from 440.1 lbs. milk, stands at the head of the senior two-year-olds; while Pauline Hengerveld

DeKol Korndyke, 14,901 lbs. fat from 472.3 lbs. milk in seven days, 58,840 lbs. fat from 1,928.7 lbs. milk in 30 days, comes second.

The junior two-year class shows strong, Woodcrest Jennie Mercedes leading with the remarkable record of 16,288 lbs. fat from 468.8 lbs. milk in seven days, 64,930 lbs. fat from 1,955.2 lbs. milk in 30 days. She is followed in due order by Kuperus Pietertje Spofford, 14,558 lbs. fat from 337.5 lbs. milk; Aaggie Dell DeKol, 13,718 lbs. fat from 403.6 lbs. milk; Countess Polly, 13,328 lbs. fat from 395.7 lbs. milk in seven days, 52,642 lbs. fat from 1,543.7 lbs. milk in 30 days; Pontiac Pauline, 12,942 lbs. fat from 374.6 lbs. milk in seven days, 52,367 lbs. fat from 1,518.1 lbs. milk in 30 days; Madison Maid Ormsby, 12,758 lbs. fat from 380.2 lbs. milk in seven days, 47,024 lbs. fat from 1,563.2 lbs. milk in 30 days; and Melba DeKol Artis, 12,592 lbs. fat from 357.3 lbs. milk. Madison Maid Ormsby was reported in the wrong class in the last issue; she should have headed the two-year class in that issue.

BEATS TO BEATERS
NEWTON'S PAIN-EXPELLER
A VETERINARY SPECIFIC
10 YEARS OLD. One to two cans will cure fleas, \$1.00 per can. Of dealers, or express prepaid. Send for booklet. The Newton Remedy Co., New York.

IMPORTANT IMPROVEMENTS IN CREAM SEPARATORS.

From the very general satisfaction derived from the use of the better class Cream Separators for some years it has seemed that the separator had reached the point of practical perfection.

As a matter of fact, however, this wonderful implement, productive of so much profit and convenience to the dairy farmer, has from the very beginning, some twenty-five years ago, reached its remarkable development through constant evolution from one stage of capacity, completeness of separation, lightness of running, durability, and general excellence into another, always quite in advance of the previous standard.

Hence it is a little less surprising than would otherwise be the case to note the many and novel changes found in the new 1908 De Laval machines, and still less so perhaps from the fact that the De Laval machines were first in the beginning and their makers have spared no effort or expense to maintain their position in the separator trade.

(A Sectional View)

The changes begin with the supply cat at the top and extend to the very lag screws in the base of the machine, and even include a change of color, which is now altered from the long familiar De Laval blue or black because of the japanned finish being baked on, as with sewing machines, in very high temperature gas ovens, which renders impossible the retention of the blue color, the extreme heat turning blue into black.

The capacities are increased from ten to twenty per cent., while there is claimed to be a noticeable improvement in the still more complete separation of the butter-fat from the milk, particularly under the more difficult but frequently unavoidable circumstances of ordinary farm and dairy use.

The supply can is now low enough to meet the objection that has sometimes been made to the lifting of milk into it. It is spun from a single sheet of tin-plate, so that it is seamless and absolutely sanitary, while it is globe-

shape and thus avoids any splashing over of the milk.

The bowls retain, of course, the distinctive "Alpha-Disc" and "Split-Wing" tubular haft De Laval features, but have been scientifically re-designed, from engineering considerations, so as to involve the least air resistance in being driven and in the discharge of cream and skim-milk from them.

In consequence, notwithstanding the greater capacities, the bowls are actually smaller than before, while they require less power, which of course means greater ease of operation and saving of wear.

The bowl is likewise more sanitary in its construction, being free from tubes, wings, orifices or any parts which are not easily un assembled and may not be quickly and completely cleaned.

The supporting spindle now sets well up under the bowl, at the center of weight and balance, while this spindle, which is the backbone of the separator and quite as important and sensitive as its human namesake, is new and different from anything made before.

It is of the combined spindle and worm screw type, but still detachable from the bowl, the spindle always remaining in the frame where no harm can come to it. It is thus said to possess all of the advantages of both the old double and single bowl spindles, with none of the previous disadvantages of either.

The top bearing, which provides the yielding cushion the bowl spindle must have, is most ingeniously simple, hardy and inexpensive. It is merely a circular bowed steel spring surrounding the bronze bushing, unaffected by wear or conditions of use and easily removed and replaced.

A new feature which will appeal to every housewife is the drip shelf coming between the frame and the stool and catching all oil and overflow of milk and water, that would otherwise run to the floor.

Most ingenious is the fastening together of the frame, drip shelf and stool with but a single bolt, which enables the machine being made, shipped and handled in sections, and at same time makes one complete, solid

BLOODED STOCK for March—1908

whole of it when quickly put together with this one screw.

There are swinging and adjustable

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on My Big Free Book to You
Just write a postal for my Big 1908 Book—shows big line of
Split Hickory Vehicles
—Sold on 30 Days Trial—Guaranteed Two Years. I make all my Buggies to order—sell them direct from factory and let you use them free for 30 days as a test. My Buggy Book gives you full particulars of my offer. Two big factories, H. C. Phelps, Pres., OHIO CARRIAGE MFG. CO., Station 8 Columbus, Ohio.

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High-Grade Flower Seeds.

20 PACKAGES FOR 10c.

Kind	Kind	Kind
Aster, 16	Poppy, 18	Portulaca, 20
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Balsam, 12	Yerba, 10	Nasturtium, 10
Pinks, 10	Forget-me-not, 10	Calliopsis, 8
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All of the above sent to any address, postpaid, for 10c, silver or air two-cent stamps. As a premium, and to introduce our seeds into every household, we will also send a **COLLECTION OF FINE, BEAUTIFUL BULBS FREE**—with catalogue.

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without a cent deposit, freight the freight and allow 10 DAYS FREE TRIAL.
IT ONLY COSTS one cent to learn our unheard of prices and marvelous offers on highest grade 1908 model bicycles.
FACTORY PRICES Do not buy a pair of tires from anyone at any price until you write for our large Art Catalog and learn our wonderful proposition on first sample bicycle going to your town.
RIDER AGENTS everywhere are money exhibiting and selling our bicycles. We sell cheaper than any other factory. Tires, Coaster-Brakes, single wheels, parts, repairs and sundries at **Actual prices**. Do Not Wait! write today for our special offer.
MEAD CYCLE CO., Dept. F208 CHICAGO

BLOODED STOCK for March—1908.

shelves for both cream and skim-milk receptacles in the smaller sizes of machines, and for the cream can alone where the machine is so large in capacity that the milk receptacle may better be set on the floor.

In the reconstruction of the machines every part has been carefully designed with reference to its extreme simplicity, not only of itself but in its assembling with the other parts with which it must fit, and it is said that the new machines have been completely un assembled down to the last part within five minutes of time, by persons who had never touched a separator before, and then completely re-assembled again within ten minutes without the slightest trouble.

The frames are strong-looking, smooth, free from recesses, sanitary and easily kept clean, with the gears and bushings protected against milk or water reaching them.

To the novice perhaps nothing is more impressive than the new design and general outline of the machines, the artistic scheme and graceful proportions of which are quite superior to anything before accomplished in separator building.

The new machines are the subject of much favorable comment by the Experiment Station and other authorities and are delighting many experienced users of separators, who are coming to appreciate some of the difficulties they have had to contend with before and some of the new features which it seems hard to be without once it is known that they can be had.

The accompanying sectional view of one of the machines illustrates some of the new features mentioned.

DR. ALEXANDER'S OPINION.

An inquirer for information about treatment for Contagious Abortion received this reply from Dr. A. T. Alexander of the Wisconsin Experimental Station: "I must confess that I cannot prescribe anything for contagious abortion that gives as good results as those obtained from the use of Dr. David Roberts Anti-Abortion Serum, which to my knowledge has succeeded where thorough application of an antiseptic treatment advised by had failed to stay or prevent the disease."

This is only expert confirmation of the testimony of hundreds of owners who have cured abortion by the Roberts Serum treatment. There is only one failure recorded where the serum was used according to the directions given in Dr. Roberts' book, "The Practical Home Veterinarian." Before his appointment as State Veterinarian of Wisconsin, Dr. Roberts compiled in book form the result of his twenty years' professional experience as a cattle specialist, comprising complete directions for detecting the first symptoms of Abortion and the method of stamping it out by the serum treatment.

In addition the book gives complete information on all live stock diseases and their cure. Any live stock owner can secure this book, bound in cloth and profusely illustrated, by sending 10 cents to pay postage, together with a statement of the number of animals he owns of different varieties, to the Dr. David Roberts Veterinary Co., 000 Grand Ave., Waukesha, Wis.

MAINTAIN YOUR SOIL'S FERTILITY

WITH AN

I. H. C.

MANURE SPREADER

THE best of all fertilizers is barnyard manure. It is your duty to apply it on the land, so that you will get the most out of it, and avoid the necessity of buying expensive commercial fertilizers.

You can make every load of manure you have go twice as far, by spreading it with one of these strong, durable, right working I. H. C. spreaders.

Kemp 20th Century (Return Apron Spreader).

Cloverleaf (Endless Apron Spreader).

Corn King (Return Apron Spreader).

If you have upwards of a hundred loads of manure to spread, any one of these machines will more than pay for itself the first season.

The spreader will do this by enabling you to cover more ground with the same manure, by getting a better stand of grain or grass, by doing your soil more

permanent good, and by greatly decreasing the labor of manure handling.

With an I. H. C. spreader, the work of hauling out and spreading manure is reduced just about one-half, and it is made agreeable work instead of a job to be dreaded and postponed as long as possible every year.

Any way you look at it, an I. H. C. spreader is a good investment.

Should you not make such an investment this year?

Every I. H. C. spreader is made so simple, strong and durable, that, with reasonable care, it will last you your lifetime.

The International agent in your town will supply you with catalog and all information you desire concerning I. H. C. spreader he handles. Or if you prefer, write for catalogs, colored hangers, etc., direct to the home office.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, Chicago, U. S. A.
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WING'S Improved WHITE CAP. A variety we have been breeding and improving for 15 years, and is now bred to the very highest standard. **Red's Yellow Dent.** An early yellow corn. Ears are medium in size, with deep grains. These two varieties can't be beat. Write for CATALOG No. 32 and free instructions on growing Alfalfa.
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HERE Is a Book for You!

It's the big—handsomely illustrated catalog of the Ohio Carriage Mfg. Company—makers of the celebrated "Split Hickory" brand of Vehicles—also of high-grade Harness—whose factories are located at Columbus, Ohio.

This book is just off the press for 1908—and shows over 125 styles of Vehicles for every purpose—together with a complete line of high-grade Harness.

You take this book sit down of an evening, and see the handsome photographic reproductions—and read the full descriptions of more Buggies and a fuller line of Harness than you could see displayed in 10 Big Salesrooms.

This Book is fairly a library of information on the question of making and selling Vehicles and Harness. We would personally like to see this Book in the home of every one of our readers, who are interested in a Vehicle or Harness of any kind.

The Ohio Carriage Mfg. Co. are too well known to our readers to need any introduction. They have advertised in our paper for years. They advertise to save you from \$25.00 to \$40.00 on a Vehicle—making the Vehicle to your order and shipping it direct from their factories.

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I Am the Paint Man

2 Full Gallons Free to Try—3 Months Time to Pay

You Pay No Freight To Try My Paint

I AM The Paint Man. I have a new way of manufacturing and selling House Paint. It's unique—it's better. Before my plan was invented, Paint was sold in two ways,—either "Ready Made"—or Paint Ingredients were bought and mixed together by a Painter. Both of these ways are at fault.

"Ready Made" Paint settles on dealers' shelves—sediment forms in the bottom of the can—the mineral pigments and chemically acting driers in "Ready Made" Paint eat the life out of the Linseed Oil—and Linseed Oil is the LIFE of ALL PAINT. Paint cannot be properly made by a painter, because of the lack of heavy mixing and grinding machinery.

My Paint is unlike any other Paint in the world. It's ready to use—but not "Ready Made." My Paint is made to order—a for the order received. It is packed in hermetically sealed cans—and the date it is made is stamped on each can by Factory Inspector.

Only PURE Linseed Oil and Pure FRESH Paint Ingredients are used in my Paint.

I sell my Paint direct from Factory to User—at very low factory prices.

You pay no dealer's or middleman's profits. I pay the freight on Six Gallon Orders or over. My paint is so good that I make this wonderful fair test offer: When you receive a shipment of 6 gallons—or over—of my Paint, you can use two full gallons to test it.

If—after you have used the Paint—you are not perfectly satisfied with it in every particular—RETURN THE BALANCE OF THE PAINT TO ME—and the two gallons you have used won't cost you one penny.

No OTHER paint manufacturer ever made such a liberal offer. It's because my Paint is the **Best Paint made**—put up in the best way—that I can make such an offer as this. I go even further—

I sell my Paint to responsible parties ON THREE MONTHS' TIME if desired.

I make three brands of Paint to suit the requirements of my immense trade.

My Strictly Pure All White Lead Paint is

O. L. Chase, The Paintman, Dept. 111, St. Louis, Mo.

absolutely the best high-grade Paint in the world.

My 40-60 Brand—Zinc and Lead Paint—is the best paint, in its class, on the market.

My Durable Paint has an immense sale everywhere and gives splendid satisfaction. This Paint is guaranteed for five years under an ironclad guarantee.

The **Purity of all my Paints is guaranteed** under a forfeit of \$100.00 IN GOLD.

All of my Paints are packed in Extra Size Gallon Cans—guaranteed to turn out a full gallon measure of Paint—my customers' insurance of full measure.

For further particulars about my Made-to-order Paint and my Plan of Selling, send for my Paint Book—the most complete book of its kind ever published. It gives full descriptions of my celebrated Paints—and complete set of large Color Cards to select from—the **biggest Color Cards** ever put into a Paint Book.

With the Paint Book I'll send you Free Book of all kinds of Painters' Supplies—sold at Direct-to-You Prices. Write me today. Get My Book and My Plan to insure you better satisfaction and lower prices on Paint.

HOG CHOLERA.

Under this head there has been a great many articles written and speeches made so far with very little general information for the average farmer. There is now before the public a method of treating hog cholera and swine plague and parasitic diseases, especially worms, that we are having frequent letters from parties using this new method telling us it is all right and does what it is claimed to do even to curing hog cholera and swine plague. Numbers of men have written us they have cured their hogs of cholera and have saved them with this method of treating hogs.

This new method above mentioned is the Snoddy Remedy, manufactured by The Dr. J. H. Snoddy Remedy Co., of Alton, Ill. The attention of the public has been often called to this new remedy through these columns, but the prejudice in the public mind against such things has been a great stumbling block in their way of availing themselves of its benefits.

Now if the people will lay their prejudice aside and use this remedy according to directions, as George W. Seckman, Mt. Sterling, Ill., the greatest Duroc breeder in this country, has done, who has cured his hogs several times the past ten years and is loud in its praise yet. Also A. W. Brown, Pres., of the Durfee Chemical Co., of Grand Rapids, Mich., who owns a large hog ranch a few miles from the city where he feeds thousands of hogs. He is one of the largest feeders in the northeast. He has had a great deal of experience with disease in his hogs and says he never cured a hog of cholera in all of his experience until he got the Snoddy Remedy. He knows he is not afraid of cholera while he has access to this wonderful remedy.

Harry Warren, Watseka, Ill., cured his hogs of Cholera last summer and did not lose but one or two shoats after he had commenced this treatment.

The fine herd of the Goodrich Stock Farm Co., of Eldon, Mo., was cured of hog cholera and swine plague only two or three years ago and has been kept in health with this remedy ever since. While they have the most valuable hogs in the United States yet they have no fear of hog cholera, because they know this remedy will master the disease when properly applied.

Thousands of others have made equally as good success as these we have mentioned.

It is the greatest remedy before the public to feed to the brood sow and cause her pigs to grow off strong and thrifty during the spring. It is to be hoped the farmers and breeders will give this matter close investigation, because we feel if properly used it will obviate the immense loss both the farmer and breeder have had the last few years.

For full particulars about it, write to The Snoddy Remedy Co., of Alton, Ill., and they will send you a little book by return mail, free, that will fully explain this new process and the disease. Every farmer should have one.

Stupendous! Extravagant! Marvelous!

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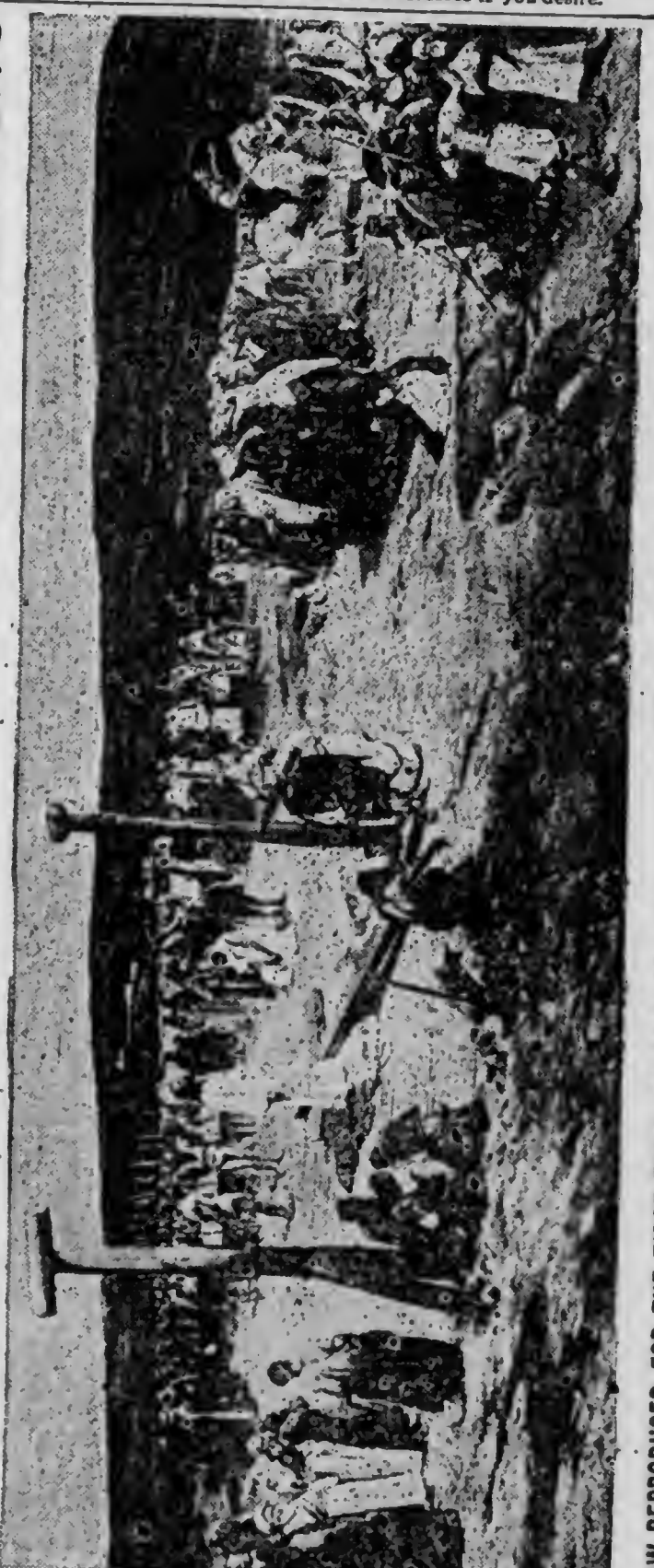
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The Postoffice Authorities at Washington have decreed that all subscribers of a monthly paper who are four (4) months in arrears must be cut off. So if you are in arrears to this paper you had better send in at once and get the benefit of this stupendous offer before the supply of policies and pictures is exhausted. Address

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FARMERS' CONGRESS.

The next session of the Farmers' National Congress will be held at Madison, Wisconsin, opening September 24. In several respects it already promises to be the most notable ever held. Although the congress has been a strong friend of the agricultural colleges and has consistently favored liberal appropriations for agricultural education, this will be the first time it has ever met in an agricultural college town. One of the most valuable features of the 1908 session will be the opportunity to see one of the leading and best agricultural colleges of the country and study it and the work of these institutions at close range. Further than that the Wisconsin college has an unusual number of persons connected with it of much more than average ability and reputation. Ex-Gov. Hoard is chairman of the board of regents. W. A. Henry, emeritus professor of agriculture, is well known through the country and his book on "Feeds and Feeding" is a household Bible in thousands of farm homes. The Babcock test has revolutionized dairying and the word Babcock has thereby become so general that it is used now as an adjective and a verb. Prof. S. M. Babcock, the father of this, is one of the

I. H. C. GASOLINE ENGINES



Are solving the hired help problem for hundreds of farmers.

Vertical Engines made in 2 and 3-Horse Power.
Horizontal Engines (Portable and Stationary) made in 4, 6, 8, 10, 12, 15 and 20-Horse Power.
Air Cooled Engines, 1-Horse Power.
Traction Engines, 10, 12, 15 and 20-Horse Power.
 Also sawing, spraying and pumping outfits.

YOU offer high wages, and still find it difficult to get hired men. Why not do as other progressive farmers are doing—let one of the dependable and ever ready I. H. C. gasoline engines be your hired man?

Suppose you want to grind feed, shell corn, shred fodder, pump water, operate the churn, grindstone, fanning mill, separator, bone cutter, or saw wood. With an I. H. C. engine, you will need no extra help. You can run the engine and attend to the machine yourself.

In the same way you will be able to do dozens of farm jobs which usually require the labor of two men. You will be surprised to find how little attention an I. H. C. engine requires.

The engine will work for you indoors

or out, in wet or dry, hot or cold weather. You will have no difficulty in operating or controlling it.

Only a few cents per hour is required for fuel. All I. H. C. engines use either gas, gasoline or denatured alcohol.

Please notice in the above list of styles and sizes that there is an I. H. C. gasoline engine adapted to practically every farm requirement.

You can have a small engine which you can easily move from place to place, as your work requires, or you can have a larger engine for stationary use. The efficiency of all I. H. C. engines is well known. You cannot possibly have any better guarantee of a dependable engine than one of these engines affords.

Call on the International local agent for catalogs, and inspect these engines. Write for colored hanger and booklet on "Development of Power."

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No. 685. Two-in-one buggy with padded wing dash and fine auto seat. Top easily removed for open wagon. Price complete, \$83.50. As good as sells for \$50 more.

professors at the agricultural college. Then without particularizing further there are Russell, Farrington, Woll and many others of exceptional standing. The opportunity to see and hear such men, and visit such a college would be without other features on the program a rich and unusual treat. But besides all this President Cameron will provide a most excellent program. Taking it all in all this session will be richly worth a long journey and the necessary time and expense. We hope that every one of the Eastern States will be represented by strong delegations. It is none too early even now for those who want to attend this 1908 session in Wisconsin to write "F. N. C." in their new diaries against the date, September 24, and to correspond early with the secretary as to details. Liberal railroad rates are anticipated but the railroads are feeling more conservative than formerly about making special rates for national conventions. But two cents per mile is rapidly becoming general, and a regular 2-cent rate is no more than a special rate of a fare and a third on a 3-cent basis.

The legislative committee and the executive committee of the congress recently met in Washington, and called on President Roosevelt, Secretary Wilson, Speaker Cannon, a number of senators and representatives and other government officials. The work of the congress was explained as well as its wishes as expressed by the resolutions adopted. The committee were cordially received, and their requests given careful attention.

They were able materially to further the interests which they represent.

GEO. M. WHITAKER, Washington, D. C. 1404 Harvard street.

WATCH THE COWS.

A recent bulletin of the Wisconsin Experiment Station warns dairymen to carefully watch their cows for tuberculosis and says:

If dairy farmers will do three things they may keep their herds from the scourge:

1. Find out the actual condition of their herds by applying the tuberculin test.
2. If found free, buy in the future only tested stock or test them before admitting same to herd.
3. For young stock and hogs use skim milk separated at home, or pasteurized properly at creamery or factory.

If disease is found, reacting animals should be separated and disposed of properly, and the barns adequately disinfected. In the case of valuable animals, healthy calves may generally be secured from reacting cows, if calves are separated at birth and fed on boiled milk of mother or milk from non-reacting animals. Remember the danger from tuberculosis lies in its hidden course of development, and for the sake of the herd itself, as well as for human beings consuming the products of the herd, one cannot afford to neglect taking such steps as are necessary to find out positively the condition of their herd.

THE ADVANTAGES OF THE MANURE SPREADER.

Among a certain class of farmers and a large class at that, there is a general impression abroad that manure requires no care, save to be piled in a large heap in the barnyard, but this is a serious mistake. Men who have studied the subject say that the two greatest sources of loss of the fertilizing value of manure are, first, improper care before being applied to the soil, and, second, improper methods of application.

Manure that is gathered into a large heap in the barnyard, to await a season when the farmer has time to draw it out and distribute it over the fields, loses from forty to fifty per cent of its fertilizing properties. These leach away into the ground and are lost forever. Some farmers prefer hauling out and dumping the manure in piles over the field, scattering broadcast at a later date. Leaching also causes a loss here, though not as serious as where the manure is piled in the yard. There is, however, a greater trouble. Where the manure is placed in piles the soil in that spot is rendered very rich, while at a short distance it is little improved over the state it was in when the manure was distributed. This method results in very uneven crops, which is undesirable from the standpoint of successful farming. Another method of application is to haul the manure direct to the field and distribute it by fork from the wagon. When the economy of the thing is considered it should not require much thought to see what a losing proposition this is. It is impossible for a man to distribute manure evenly over a field; there is the loss of time incident to such methods and there is the labor.

Working by hand men will put out the manure, even with the most careful work, two or three times as thick as it should be done; will spread it on in lumps instead of in fine particles evenly distributed. The manure spreader will put the same amount of fertilizer over two or three times as much ground; will spread it with the greatest evenness; instead of having a bare spot here and there and a lot of rank grain and grass in places. If you use a spreader you will have an even growth of grain or grass all over the entire field. Not only can you economize on the amount of manure used, but better than that the manure spreader will increase your crops from 15 to 35 per cent in quantity and the quality will be increased in almost the same proportions, so that not only do you get a bigger yield from your acres, but you get a bigger price for the crops you take off from them.

Buying a spreader is not an expense; it is an investment which will make its returns more promptly and more surely than any other implement on the farm. The spreader saves the manure and makes it do better work, so that the spreader pays for itself in one season on practically any crop that you have.

It is undisputed that in addition to the superior quality of its work the manure spreader is one of the most effective of labor savers, and it does a work that is not only very laborious to do by hand, but the most offensive and disagreeable farm work. This feature is important because the effect

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—that's what FARM AND FIRESIDE is. It spends more money on its editorial matter than any other farm paper. Comes twice a month and gives you the equivalent of 1,600 standard-size pages of reading matter a year. FARM AND FIRESIDE prints and circulates more copies each month than any other farm paper in America. That shows how well it is liked! Has twelve departments covering every side of farm life, from plowing to the kitchen. Made for the whole family. Stops when your time is up. Join the FARM AND FIRESIDE family and be one of our two and a half million readers.

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Send us only 25 cents with this coupon or a letter, and we will send you FARM AND FIRESIDE till April, 1909, and the 500 pictures of Roosevelt besides, by return mail, postpaid. This offer is limited, and you cannot get FARM AND FIRESIDE with these pictures anywhere else on earth. Subscribe now before the price goes up!

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is to utilize all the manure of the farm, while under the manual system of handling much of it was allowed to go to waste, for want of time or inclination to haul it to the fields.

Another virtue of the spreader is in connection with pastures and meadows, which often need coatings of manure, but get them infrequently, if at all, where spreading is done by hand because the irregular, thick-and-thin hand spreading interferes with pasturing at the time, and with harvesting the meadow later on, while machine spreading avoids both objections by working the manure up fine and spreading it evenly. This is very important in crop rotation, when it is often desirable to top-dress grass lands that are to be plowed subsequently.

The manure spreader has come to be a farm necessity. The farm can only be made to pay by keeping the soil in the highest state of fertility. That means making the most out of the manure, the best of all fertilizers, and the only one that is produced on the farm. All are agreed that manure can be made to go further and produce better results by spreading with machine than by hand. The popular estimate is that the spreader doubles the value of the manure. If this be true, or approximately true, it will be easy to arrive at the conclusion that a spreader will pay for itself in increased crops and soil benefits in one or two years.

Their purpose being to maintain and increase soil fertility, which is the basis of all crops, manure spreaders should be regarded, not as an expense, but in the light of a permanent investment, like the land itself.

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DAIRYING ENRICHES

THE FARM.

Something of the importance of live stock and especially dairying on the farm is seen in the fact that only 15 cents of fertility leaves the farm in 500 pounds of butter sold, but \$18 of fertility goes from the farm for

every 100 bushels of corn sold from it. This is the difference to the farm in grain farming and dairy farming when considered as a final analysis. And herein are the reasons why dairy farming enriches the farm, as it does, while grain farming impoverishes it, without live stock to return fertility.

BLOODED STOCK for March—1908.

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The kind that grows and makes a big crop. Also pure bred Duroc-Jersey Swine. Book and Prices free. MEADOWBROOK SEED FARMS, Williamsport, Ohio.

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Farm and Fireside has been a great farm paper for thirty years, because it has fought for, worked for, and helped farmers ever since it was established. It has always been the leader in the national farm field, because it is a paper for the farmer first, but for his wife and family too. It is the national farm paper.

But good and big and helpful as Farm and Fireside has always been, it is going to be better than ever this coming year. They have engaged the finest staff of contributors who ever wrote for a farm paper. They cost money—lots of it—but they're worth it.

THE CONTRIBUTORS

Among the many famous men writing for Farm and Fireside, in addition to Mr. Greiner, Mr. Fred Grundy, and all the other well-known Farm and Fireside editors, the following are a few:

Dr. L. H. Bailey, Dean of the New York State Agricultural College and writer of various books on agricultural subjects.
F. D. Coburn, Secretary Kansas Department of Agriculture.
Dr. M. A. Scovall, Director of Agricultural Experiment Station of Kentucky.
Prof. G. I. Christie, of the Indiana Agricultural Experiment Station.
John Craig, Professor of Horticulture, Cornell University.
Charles S. Plumb, Professor of Animal Husbandry, Ohio College of Agriculture.
Dr. H. J. Water, Dean of the College of Agriculture and Director of Agricultural Ex. Station of Mo.
Dr. E. A. Bryan, President of the State College Washington and Director of the Experimental Station.
Prof. C. O. Bull, Assistant in Agriculture, University of Minnesota.
R. A. Moore, Professor of Agronomy, University of Wisconsin.
Isn't this just about the best list of farm writers you ever saw? But these are not by any means all the good things in store for our readers. There is

THE REVIEW OF THE FARM PRESS

This is only one of Farm and Fireside's twelve to fifteen departments, but it alone is worth far more than the price of the whole paper, because it gives in concise, readable, boiled-down form the best things from every other farm paper. If you have the Review of the Farm Press, you won't need any other farm paper, because it embraces them all.

FARM MANAGEMENT

will be a new department in Farm and Fireside this coming year. They will strive to make it earn and save many dollars each year for every Farm and Fireside family. It will deal with the business side of farming—something about which farmers can all know more, and which means dollars in their pockets. It will show, among other things, how money—lots of it—has been made in every kind of farming, by methods which you have never thought of, perhaps. "Farm Management" will be something different from what any other farm paper publishes.

FRUIT GROWING

Mr. S. B. Green, who conducts this department in Farm and Fireside, is a recognized authority on fruit growing. Perhaps your orchard is not bearing as it should, and you don't know why. Do insects ever trouble your trees? Farm and Fireside will clear all this up for you in a plain, practical way. You'll find it mighty helpful.

GARDENING

The garden is a prolific source of revenue to any farmer, provided it is handled properly. To handle it properly means dollars in your pocket. That is just where you will find the "Old Reliable" Farm and Fireside most helpful. The gardening pages are carefully edited, and are filled with the most helpful and useful hints.

THE GRANGE

No organization in this country is doing a greater good than the Grange. It is the clubhouse of the country, the one place where the members can meet for social chat and conversation. No farm paper in America is more valuable to the granger than Farm and Fireside, because Farm and Fireside is with the farmers through thick and thin. It devotes at least one page every issue to Grange news.

THE "WELL-KNOWN FARMERS" SERIES

During the coming winter, Farm and Fireside will print a half dozen or more of the most interesting articles that farmers could possibly read. We purpose to take you right to the homes of some of America's most famous farmers—men who are known the country over—and show you not only how they run their farms, but how they live in their homes too. These articles will be called "Well-Known Farmers and Their Homes," and will deal with men who have given the best of their lives to working for other farmers. Don't miss them!

Send your Subscription at once to

Blooded Stock, - - Oxford, Pa.

BLOODED STOCK for March—1908.

COST OF FEEDING.

A good many cattle feeders find it close work to make ends meet in feeding corn at present prices with existing market quotations for cattle. It takes the best grade bought as feeders at moderate prices to reach. The Drovers' Journal refers to some recent transactions in these lines and says: One lot of steers which was bought in the panicky days last November at a cost of \$4.40 sold at \$5.95, and the feeder figured that he got about 72 cents per bushel for all the corn they consumed. These made a fair amount of profit. Occasionally there are some of the long-fed high-coating kinds still showing up, but the number is comparatively small. The feeders who had been holding in early and midwinter weeks have liquidated most of the long-fed classes, and particularly is this true of feeders in Illinois, Iowa and Missouri.

In Kansas and Nebraska, however, there is still claimed to be a fair share of the heavy long-fed steers in feed lots and traders say they would have to bring \$6.50@7 in order to net the feeders a profit on their winter's work. Some of these cattle cost as high as \$5.50 as feeders, but the majority were bought under \$5.25.

It has been several months since such high prices were paid for fleshy feeding steers and it is likely to be some time before they will rule again. The experiences of the last winter have taught cattle feeders to be cautious in buying. They will study long before paying much above \$5 for feeding steers again, although right at the present time they are paying \$4.70 @ 5 for good to choice kinds. These latter prices are looked upon by the trade as being high enough in view of general business prospects. A good share of the shortfed and pretty good beef steers now being marketed cost around \$4 and under as feeders, and these are the ones which are netting feeders the greatest margin of profit.

BOVINE TUBERCULOSIS.

A royal commission appointed by King Edward of England to investigate whether tuberculosis in man and animals is one and the same disease, has reported that "there can be no doubt but that in some cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis; and there also can be no doubt that in the majority of these cases at least the bacillus is introduced through cow's milk. Cow's milk containing bovine tubercle bacilli is clearly a cause of tuberculosis in man."

In investigations by our own Bureau of Animal Industry it was found that tubercle bacilli are readily disseminated in the manure. In fact the manure is considered the most dangerous factor in the spread of tuberculosis.

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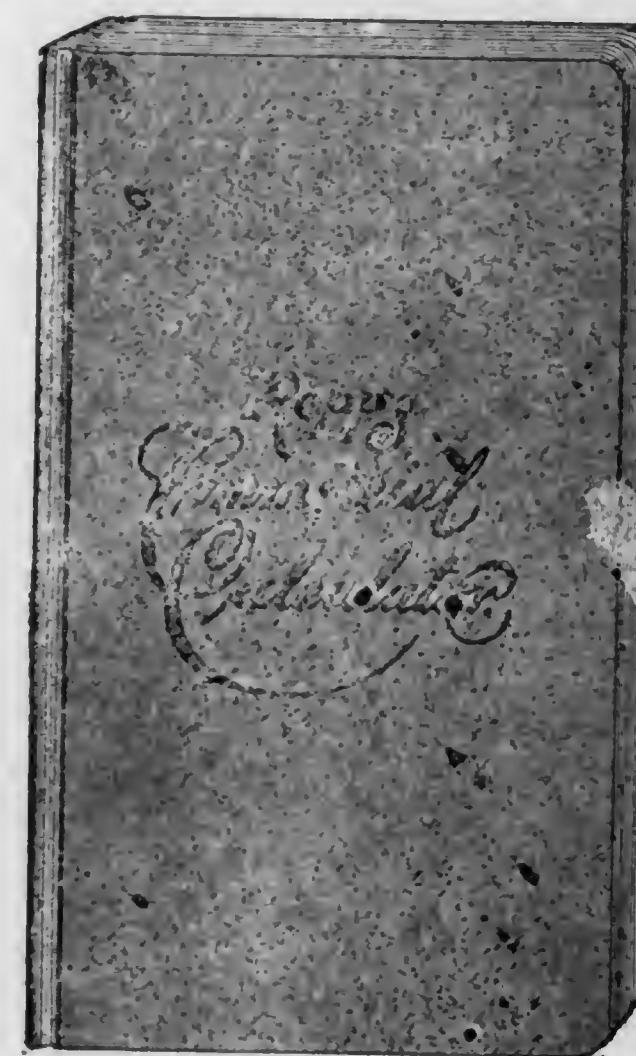
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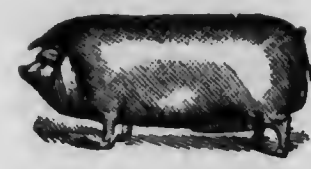
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62
YEARS
EXPERIENCE
BACK OF THEM

GOOD AND POOR COWS.

This country is still full of them, and it may be some comfort to their owners to know that Canada also has her share, on the principle that "misery loves company." A writer in the Canadian Dairyman sums them up in a district of that country and says:

"The record of two cow testing associations in the Province of Quebec are full of interest. In one association, the highest yield per cow in a certain herd during six months, June to November, was 132 pounds fat. In a neighboring herd the best yield was 200 pounds fat. This is a difference in the earning power of these two cows of at least \$17 in six months. This is not a contrast between a good and a poor cow, but between the best cow in each herd. In this case 20 cows on the one kind equal 44 of the other as regards value of product. Why should not the returns from scores, yes hundreds, of our dairy cows be increased by \$17 each? They could be, were farmers fully alive to the possibilities of systematic improvement.

In another association a more startling difference was discernable. In one herd, the best cow yielded 450 pounds of fat during the full period of lactation, while the best cow in another herd gave only 141 pounds. With butter fat at 25 cents a pound, the one cow is credited with \$112.70, and the other with only \$35.32. This is a difference of \$77.38 between these two cows. Assuming that the cost of feed is the same in both cases, and is \$30, we find that 13 cows in the one case would equal 188 of the other."

These facts are the best proof that milk cows should be tested and a record kept long enough to see whether they were profitable or an actual loss to the owners. Here are some that make their owners a good profit, and others evidently are kept at a loss. A test for a few months would show what cows should be kept and what fattened and sold for beef.

If the horses gnaw the woodwork in the stalls, protect it with tin or smooth wire. Be sure there are no ragged ends to tear your clothes and scratch your hands.

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20 choice Spring Sows, open; 25 Fall Pigs both sexes, and also some very fine yearling bred sows that are extra fine and were prize winners last Fall. 12 head Poland-Chinas from 8 to 12 months old. I never had a better offering in young sows than this.

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(Photograph taken when 7 months old)

Sired by "Nannette Pledge Butter Boy," whose six nearest dams on official test have averaged 23 lbs. 13 ozs. of butter for the week. 4.06 butter fat. Three cows mentioned in his pedigree have given over 110 lbs. milk in one day. The dam of "Clothilde Dekol Dot's Butter Boy" has an official record of 58 lbs. 13 ozs. milk in one day, and 12.78 lbs butter in 7 days as a two-year-old with first calf. She gave 72 lbs. 8 ozs. milk in one day when seven years old.

This grand calf was bred and owned by Madison Cooper, Watertown, N. Y., who has one of the finest herds of Holsteins in the State.

A good road is a great saver of horse flesh. It keeps one's disposition good, too. Good digestion means good health. Both can be acquired by good regular care.



The above cut shows a section of Clark's New England Abandoned Farm. A section of his Alfalfa field was sown after a most thorough cultivation, June 3rd, 1905; fifty-two days thereafter the first crop was cut when fully one-tenth of the alfalfa was in blossom and produced one and one-half tons to the acre. The second crop was cut fifty-three days later, producing fully one and one-half tons of well-dried alfalfa hay to each acre. The first year two crops, the second four crops, and the third year five crops. Total in three years fifty-six and one-half tons well dried alfalfa hay.

As to the matter of profit I have called the three years' product of fifty-six tons worth \$18.00 per ton, net cash \$900.00. It has cost me net cash for fertilizer \$237.00, I have called it \$250.00. To secure the three years'

crop, actual cost \$55.00, I have called it \$60.00. Harrowing in all \$40.00, I have called in \$50.00, have harrowed the field over with my Double Action Harrow since seeding eighteen times, twice after each cutting. The alfalfa seed has cost me \$30.00, I have called it \$40.00. The total cost of production I have called \$400.00, the total profit of over \$47.00 per acre, I have called it \$40.00. In other words I have called it a profit of \$450.00 in three years after throwing out everything that could be allowed, as shrinkage, prices, or otherwise.

Three and one-half acres of a high, dry New England abandoned farm giving a profit of \$450 in three years.

If your patrons want to know how, please tell them to send me a two-cent stamp to Higganum, Conn., and learn how to do it.

Yours truly, George M. Clark.

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In almost every outbreak of cholera you will find hogs very wormy. They get a hog out of condition and unthrifty. Then it is an easy prey to disease. The Snoddy Remedy will destroy every character of a hog worm. Even the liver and lung worms, which are the most dangerous, are easily destroyed with the Snoddy Remedy. Ten cents worth of the Snoddy Remedy will clear out the worms and purify the blood of a hundred pound shoat, so that he will be worth one dollar or more in a few weeks than he would have gained without this remedy. Can't you afford to invest ten cents per head to make your shoats worth a dollar per head more than they will without this little investment. Then why waste time and feed on wormy, runty hogs when it is easy to have them thrifty.

It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

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NEW SUGAR FEED PLANT.

Farmers and stockmen all over the country, and especially in the north-west will be pleased to learn of the "opening for business" of the International Sugar Feed Company's \$100,000 plant located at Fifteenth Avenue S. E. and Rollins Street, Minneapolis.

A paragraph in an article written for "Flour and Feed" in proof of the value of molasses or sugar feeds. It reads: "We intend also to show the beneficial effects a ration of sugar has on other animals besides the horse. If anything it is more essential to the meat supply of the people and to the dairy which interests us all. From our own special experience we are prepared to state positively that it makes purer and better milk, more of it, milk that contains more fat and sugar at a less cost than any other feed."

The feeding value of molasses or sugar in combination with various grains has been proven beyond the shadow of a doubt and has been recognized for a number of years. There has been, however, a great difficulty in finding a process that would put the molasses in a condition to be conveniently handled on the market and in feeding. The greatest problem to be solved, however, was to select and proportion the grains and sweetening substance as to produce a scientifically balanced ration especially adapted to various purposes and to the different animals fed.

M. W. Savage, proprietor of the International Stock Food Company, has had his chemists working on this problem for a number of years. The desired results were attained last fall and Mr. Savage incorporated the International Sugar Feed Company. He then secured the services of S. L. Frazier, of Chicago, the father of the saccharine feed business in this country and the inventor of several machines used in the manufacture thereof. The contract for the erection of a \$100,000 sugar feed plant was awarded to the McDonald Engineering Company of Chicago. In a remarkably short time the plant has been completed and the process of manufacture was begun February 1st. The plant is a model of its kind and the engineers say that more work can be done with less manual labor than in any mill of any kind in the world.

It is located on an entire block leased by the company and the building has a floor space of 140x160 feet. It is absolutely fireproof, being built of reinforced concrete. Its construction required the use of one hundred and fifty tons of steel and three thousand barrels of cement. The first floor or basement is fifteen feet high and on it is located much of the automatic machinery, including ten twenty-five horse power motors, one individual motor being used to each unit of machinery. On this floor there is also a molasses cistern with a capacity of 125,000 gallons.

The molasses from the car tanks is dumped by gravity into this cistern from whence it is pumped by steam pumps to a 6,000 gallon steel tank, where it is warmed by coils, pumped to tanks above and flows into the molasses machine on the second floor. The grain is unloaded by power shovels and dumped on the elevator boot, from where it is lifted into any one of the fifty-seven bins which occupy the third floor. It flows by gravity from the bins into the Robinson's Steel Attrition Mills, where it is ground. From there it passes into another set of mills and into the mixer, where the different materials are combined and passed on to the molasses machine, where the feed is processed and made ready to be bagged. This plant has a capacity of three hundred tons of finished product daily and there is room in the building for enough additional machinery to double this capacity.

The sugar feed manufactured will be of various kinds, including a balanced ration for cows, one for horses, one for swine and one for chickens. Besides the molasses there will be used in the production of this saccharine feed the best grade of oats, barley, rye, corn, linseed oil meal and some other materials. Remarkable interest has already been aroused in this plant and the company is already in receipt of a number of large orders for its product, and it is freely predicted that it will soon be working at its greatest capacity.

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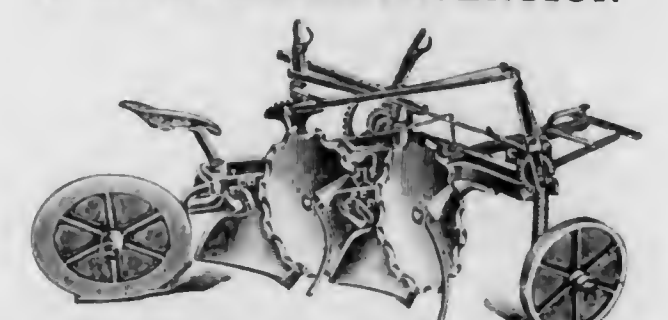
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Saves pigs and lambs, anyone can use it. Holder holds any size around upper jaw, hand above with two fingers. Money back if not satisfied.
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Prof. George Fellows, of Indiana, says: "Most histories of the world are dreary compilations. This work, however, is clear, interesting and accurate."

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The following list comprises the name of every live stock breeders' association in the United States, of which we have record. The name and address of secretary will also be found in every case. If any associations of this kind are not listed, we ask that secretaries notify us at once and also notify us at once as to any change in names and addresses. It will be the intention to keep this list up to date, and we ask for the co-operation of secretaries to that end.

Cattle Breeders.

American Aberdeen-Angus Breeders' Association—Thomas McFarlane, Pedigree Record Building, Union Stock Yards, Chicago, Secretary.
American Devon Cattle Club—L. P. Simon, Newark, O., Secretary.
American Galloway Breeders' Association—Chas. Gray, Pedigree Record Building, Union Stock Yards, Chicago, Secretary.
American Guernsey Cattle Club—W. H. Caldwell, Peterboro, N. H., Secretary.
American Hereford Breeders' Association—C. R. Thomas, Stock Yards, Kansas City, Mo., Secretary.
American Jersey Cattle Club—J. J. Hemingway, New York, Secretary.
The Polled Durham Breeders' Ass'n, J. H. Martz, Sec.-Treas., Greenville, Ohio.
American Short-Horn Breeders' Association—John W. Groves, Pedigree Record Building, Union Stock Yards, Chicago, Secretary.
American Sussex Breeders' Association—Overton Lea, Nashville, Tenn., Secretary.
Ayrshire Breeders' Association—C. M. Winslow, Brandon, Vt., Secretary.
Breeders' Association of French-Canadian Cattle of the United States—W. J. McCurdy, Binghamton, N. Y., Secretary.
Dutch Belted Cattle Association of America—H. B. Richards, Easton, Pa., Secretary.
Holstein-Friesian Association of America—F. L. Houghton, Brattleboro, Vt., Secretary.
Maine State Jersey Cattle Association—N. R. Pike, Winthrop, Maine, Secretary.
National Polled Hereford Breeders' Association—A. E. White, Chicago, Secretary, 5629 Madison Ave.
American Polled Hereford Breeders' Association—Warren Gammon, Secretary, Des Moines, Iowa.
Red Polled Cattle Club of America (Incorporated)—Harley A. Martin, Gotham, Wisconsin, Secretary.
Shelby County Fine Stock Exchange, Harlan, Iowa—L. H. Packard, Sec'y.

Horse Breeders.

American Association of Importers and Breeders of Belgian Draft Horses—J. D. Connor, Jr., Wabash, Indiana, Secretary.
American Breeders' Association of Jacks and Jennets—J. W. Jones, Columbia, Tenn., Secretary.
American Clydesdale Association—R. B. Ogilvie, Union Stock Yards, Chicago, Secretary.
Percheron Society of America—Geo. W. Stubbins, Union Stock Yards, Chicago, Secretary.
The Percheron Roadster Co., Chas. C. Glenn, Columbus, Ohio, Secretary.
American Saddle Horse Breeders' Association—J. B. Nail, Louisville, Ky., Secretary.
American Shetland Pony Club—Mortimer Levering, Lafayette, Indiana, Secretary.
American Shire Horse Breeders' Association—Charles Burgess, Wenona, Ill., Secretary.
American Stud Book (Thoroughbreds)—James E. Wheeler, N. Y., Registrar.
American Trotting Register Co.—W. H. Knight, Chicago, Secretary.
American Suffolk Horse Association—Alexander Galbraith, Janesville, Wis., Secretary.
Cleveland Bay Society of America—R. F. Stericker, West Orange, N. J., Secretary.
The French Coach Horse Roadster Co., Mr. Chas. C. Glenn, Secretary, Columbus, Ohio.
French Coach Horse Society of

America—Duncan E. Willett, 2112 Michigan Ave., Chicago, Secretary.
German Hanoverian and Oldenburg Coach Horse Breeders' Association—J. Crouch, Lafayette, Ind., Secretary.
Morgan Horse Register—Joseph Batte, Middlebury, Vt., editor.
National French Draft Horse Association—C. E. Stubbs, Fairfield, Iowa, Secretary.
Oldenburg Coach Horse Association of America—C. E. Stubbs, Fairfield, Iowa, Secretary.

Sheep Breeders.

American and Delaine Merino Record Association—S. M. Cleaver, Delaware, O., Secretary.
Black-Top Spanish Merino Sheep Breeders' Publishing Association—R. P. Berry, Clokey, Pa., Secretary.
Franco-American Merino Sheep Breeders' Association—John P. Ray, Hemlock, N. Y., Secretary.
Improved Black-Top Delaine Merino Sheep-Breeders' Association—O. M. Robertson, Eaton Rapids, Mich., Secretary.
Interstate and International Polled Dickinson Register—H. G. McDowell, Canton, O., Secretary.
Michigan Merino Sheep Breeders' Association—E. N. Ball, Hamburg, Mich., Secretary.
National Delaine Merino Sheep-Breeders' Association—John B. McClelland, Cannonsburg, Pa., Secretary.
National Merino Sheep Register Association—R. O. Logan, California, Mich., Secretary.
Standard American Merino Sheep-Breeders' Association—John P. Ray, Hemlock, N. Y., Secretary.
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Hampshire Down Breeders' Association of America—C. A. Tyler, Nottawa, Mich., Secretary.
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American Milch Goat Record Association—W. A. Shafer, Hamilton, O., Secretary.

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Improved Small Yorkshire Club of America—F. B. Stewart, Espersville, Pa., Secretary.
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Southwestern Poland-China Record Association—H. P. Wilson, Gadsden, Tenn., Secretary.
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If a Holstein cow giving 40 quarts of milk per day, and requiring no more room than a common cow, giving 10 quarts, can be reared as easily as an inferior cow, is it wise to keep poor milkers?—E. E. Nelson, Kimball, Neb.

A writer recommends wood ashes for lice. I advise him to try Zenoleum, manufactured by Zenner Disinfectant Co., Detroit, Mich. It will injure neither hide nor hair, but the lice go.—F. H. Gripman, Kinderhook, Mich.

Two years ago abortion broke out in our herd, 13 cows losing their calves in about two months. I was just starting in the dairy business and of course it hurt. After using various treatments without success I got the remedy referred to. I commenced this Dr. David Roberts treatment last June according to directions. One cow due to freshen September 8 aborted in August. Since then we have had 13 cows that were given the remedy carry their calves full time. He says that a cow must be given a full bottle of the serum before it is cured. The cow that aborted in August had not been under treatment long enough to get a full bottle. When a cow aborts we always separate her from the herd and disinfect daily as long as there is any discharge. I honestly believe that the serum helps the cows, but I have not used it long enough to say that it is a sure cure.—S. S. C., Elmira, N. Y.

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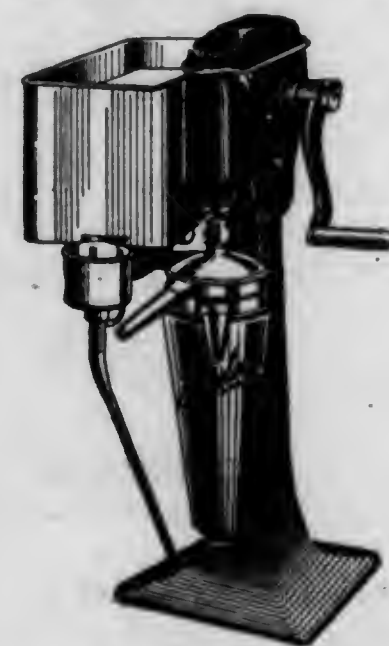
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I can sell my butter to customers where I never could sell it before getting the separator. We milk six cows and it will make more than enough butter extra to pay for the machine in this one season.
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Twice as Much Cream.

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We get twice as much cream as we did skimming by hand. Tubulars soon pay for themselves.
MRS. W. G. RUSSELL.

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KAW, OKLAHOMA, April 24, 1907.
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MRS. MARELLA.



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If you are economically inclined; if you want to save money and increase your bank account here's your chance. Our valuable book, "Business Dairying" will show you how, and our latest catalog tells all about the "Tubular." We'll send them both free if you will write today, ask for book No. 300.

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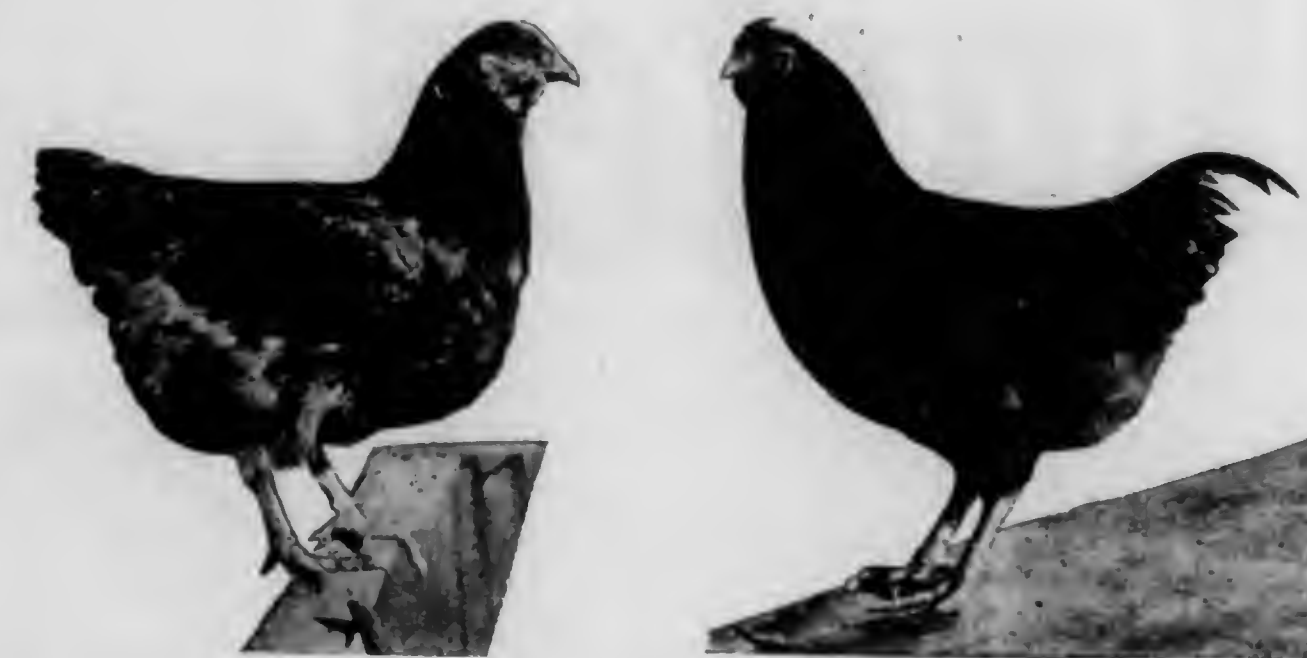
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Vol. XIV

APRIL 1908 No. 2

GREEN FORAGE FOR HOGS.

An especially timely bulletin has just been issued from the Missouri Experiment Station by Dean H. J. Waters giving the results of some experiments to determine the value of different forage crops for hogs.

Thirty-six pigs weighing about 50 pounds each were fed in lots on different forage crops in connection with corn until they were ready for market, accurate account being kept of the cost of gains made.

In cheapness of gains the feeds used ranked as follows: Corn and skim milk, cheapest; corn and alfalfa, second; corn and red clover, third; corn and bluegrass, fourth; corn and rape, fifth; corn and ship stuff, sixth.

A saving of about 75 cents a hundred in the cost gain was effected by using green clover instead of fresh bluegrass. A saving of \$1.00 a hundred was effected by using alfalfa instead of bluegrass.

When it is realized that alfalfa comes on early and when properly clipped stays green all summer and until the very hard freezes of early winter, its importance as a hog pasture is apparent. Clover yields more forage per acre than bluegrass, and as shown by these experiments has a much higher, feeding value. It is of the utmost importance therefore to provide this sort of pasture for hogs rather than to require them to run on a bluegrass pasture, or even worse than bluegrass, a timothy pasture, or even far worse than this, to confine them in a dry lot in the summer-time.

BLOODED STOCK for April—1908.



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dine Lyons 3d, a splendid heifer of typ
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butter and milk producing strains of
the breed. This young heifer is a re
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or considerably more white than black,
handsomely marked. At two years old
she ought to be worth upwards of
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have the pleasure and profit of raising
a good one.

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Colony Brooder No. 24

is divided into two large compartments, each 3x3 feet. In the first compartment is the Hover, leaving plenty of room outside the Hover for the chicks to run about the room which is heated by the escaping heat from the Hover. There are two features about this Brooder which you will find in no other. With it, when your chicks become too large for the Hover, you simply remove it without disjoining any pipes, and without disarranging any parts of the Brooder. And when you desire to remove the chicks to other quarters, all you have to do to get it ready for another brood is simply to set back the top of the Hover. To convert into a ground-floor Colony-house, simply remove the roof—you can do it alone—reach down and raise the floor out without taking Brooder apart in the least—replace roof, and it's ready. Nothing could be simpler than this Brooder, and it's really less bother than looking after an old hen or two. We'll make you a special price on the Brooder delivered, freight paid, east of the Mississippi River, or allow freight to the River on all orders west. Don't buy until you get our price. Write today. Ask for Catalog 16

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Clubbing offers will be found on another page.

OURSELVES

LAST MONTH we sent out notices to our subscribers whose subscriptions had expired and quite a number of them have already sent in their renewals. Those who have not will confer a great favor on us by their prompt attention to this matter. The new post office ruling makes it impossible for us to extend credit to our patrons, as we formerly could. Not only are we able to put out a better paper, by getting our money promptly from our subscriptions, but it is a great satisfaction to every one concerned. If we do not hear from you the paper will be discontinued after a couple of months, but it is a great satisfaction to us to have at least a card requesting the paper to be discontinued, then there is no doubt as to the wishes of the subscriber.

WE KNOW the Spring work is well advanced at the present time, but before our readers get into the thick of it we desire to ask them to make one more effort to secure a few subscriptions for Bled Stock in their neighborhood. Everyone counts in building up a paper, and those who subscribe at the present time will get the benefit of the advance in subscription rates that will be made this Fall when Bled Stock is changed. This is especially true of those who subscribe for three years for \$1.00. Beginning with the September number the subscription rate will be changed to \$1.00 per year. Note this change and take advantage of it at once.

ON SEVERAL occasions we have intimated that there would be a change made in Bled Stock just as soon as we could see our way clear to do so. Plans have so far progressed that we can now state that commencing with the September number the form of Bled Stock will be entirely changed, and it is our purpose to make the paper all that the name implies. In fact, we desire to make it one of the finest farm papers printed. It will be printed on the very best of paper and finely illustrated. Special articles will be prepared for each number along the lines taken up by the great magazines of the country. Therefore, old subscribers should see that their subscriptions are renewed, so as to keep their names on our list and get the full benefit of the advance in rate when this change is made.

OUR ADVERTISERS should take advantage of the present low rate and make contracts for the coming year, so as to secure these low rates before they are changed with the form of Bled Stock, as mentioned above. We will be glad to take this matter up with any advertiser, giving special rates on yearly contracts. This proposition is worthy of the close attention of our advertisers at this time. Write us what space, etc., you would like to have, so as to be ready for the change that will be made. We can assure all advertisers that this will be of great benefit to them in the way of saving on their yearly advertising.

ONE OF THE TROUBLES that confronts the breeders of pure bred live stock is disposing of his surplus animals. Many breeders who had the very best animals have tried advertising yet failed to dispose of them, because they did not have the knack of telling what they had in a manner to satisfy the buyer. Others who did not have half as good stock were able to dispose of it at larger prices because they were good letter writers. Breeders wishing to get up good printed matter, circulars, etc., will do well to write us on the subject. We are prepared and willing to get up the details of such catalogues and are always glad to submit samples. Good catalogues are the cheapest and make the most sales. First have the stock to satisfy the customer and then tell what you have in a manner that will attract buyers. Write us on the subject.

SOME FARMERS go for one line, others follow another, each using different methods. Each in his own way or fancy, but seldom do they combine and all work for one object, and stock breeders are no exceptions.

MUST HAVE PROTEIN.

Mr. H. Glendinning in a recent address to the dairyman of Western Ontario, urged the importance of protein foods in order to obtain the best results, and said:

"We must have succulent food in order to produce milk cheaply. We can get that in the form of corn silage. There are only 21 pounds of dry matter in 100 pounds of silage, the balance consists of water. In protein there is only nine-tenths of a pound in 100 pounds of corn silage. There are many people who make a great mistake in building a silo and feeding corn silage almost exclusively. At the end of the year they say that they did not have very good results and go out of the business. I would be inclined to do that myself. Feed this feed along with something else, however, and then we get good results. Depend upon your corn silage for succulency and palatability. These are things that are required in feeding the cows. Where we feed bran with corn silage we have excellent results.

"The protein in the bran is 12-20 pounds in every hundred, and when you feed bran in connection with corn silage it gives you a balanced ration. If you feed this food you are sure to have a big flow of milk. Bran has got away out of sight. I can remember the time when bran was considered of no value. I have seen the shutes turned into the creek from the grist mill and the bran allowed to run down the river. There are many others who have seen the same thing, but you know dairy conventions, agricultural societies, farmers' institutes, agricultural colleges, and these things have been preaching the value of bran and we have preached it to the highest price, and there is not very much in it from a commercial standpoint.

"Now we have to turn our attention to something else. Our main object is to get that protein. I want to call attention to the fact that the average milk has a little less than 13 pounds of solid matter, and still in that 13 pounds there are 3-6-10 pounds of protein. If you want to produce milk you must feed largely of that nutrient. You cannot expect to get protein out of a food that does not contain that, any more than you can expect to get flour out of a mill by putting sawdust through it. You must have the right kind of material to get the flour, and you must have the right kind of material to give the cow in order to get the milk.

"Alfalfa hay will take the place of the bran as nearly as anything we have got, and we can produce it ourselves. One hundred pounds of alfalfa contains 11 pounds of protein, nearly as much as that of bran. We can put alfalfa hay in the barn where you have an average crop of from five to six tons a year, cutting it three times. You can produce more on good land and proper treatment. You can produce that hay and put it in your barn at \$2 a ton, against \$22 to \$25 a ton for bran.

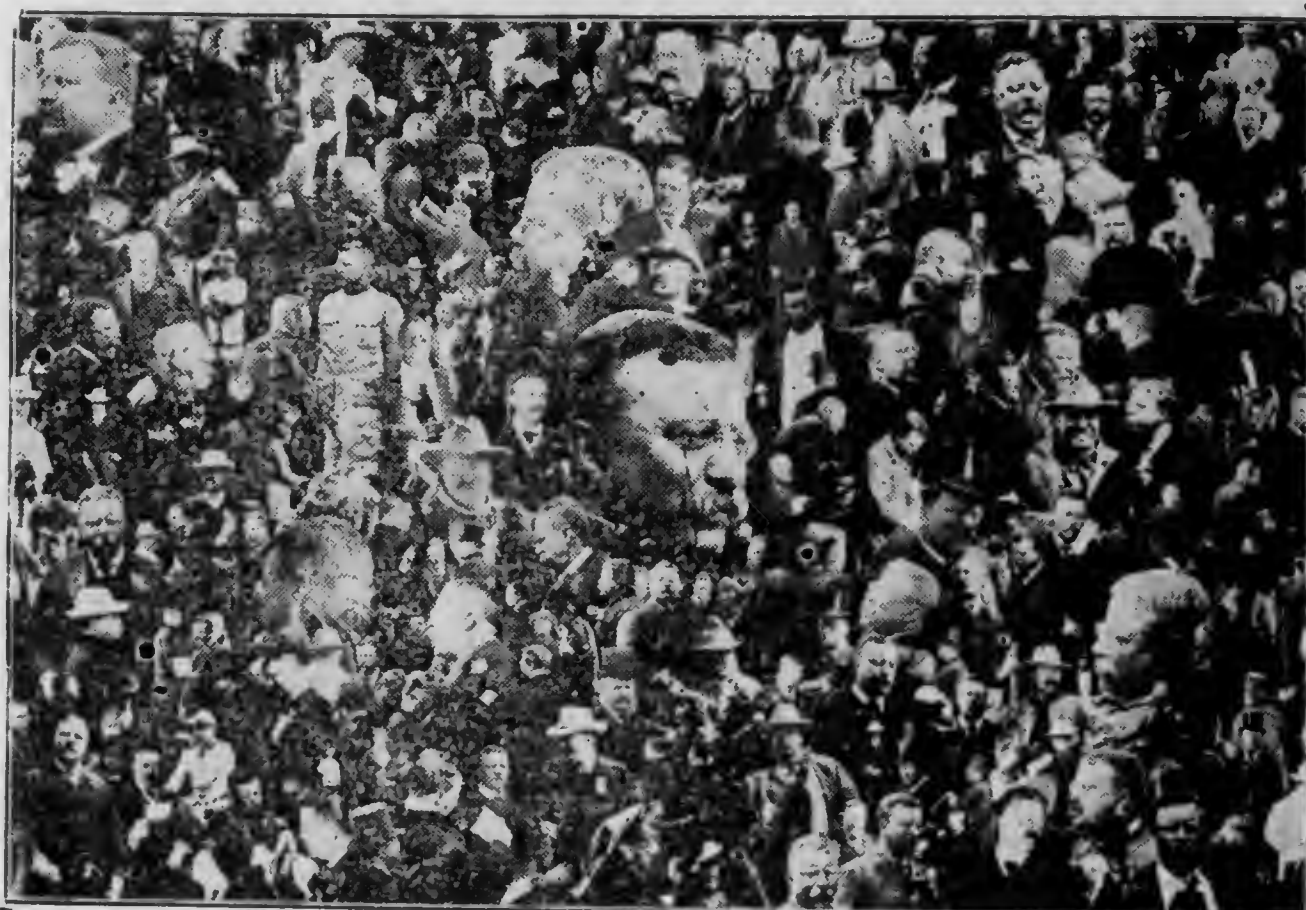
Q. "You cannot grow five tons to the acre on land here?"

A. "Yes, you can, the trouble is you don't know how."

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It will positively be withdrawn. For a few more weeks, however, we give the readers of this paper one great last chance to subscribe at this low rate for FARM AND FIRESIDE—and get, in addition, 500 pictures of the greatest living American—President Roosevelt—all carefully arranged ensemble on one large reproduction 13½ x 20½ inches.

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We want one of these great pictures in every farm home—because no President has ever been as friendly to the farmers as President Roosevelt. This picture is printed on fine supercalendered coated stock, all ready to hang up in your parlor or sitting room the minute you get it.

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—that's what FARM AND FIRESIDE is. It spends more money on its editorial matter than any other farm paper. Comes twice a month and gives you the equivalent of 1,600 standard-size pages of reading matter a year. FARM AND FIRESIDE prints and circulates more copies each month than any other farm paper in America. That shows how well it is liked! Has twelve departments covering every side of farm life, from plowing to the kitchen. Made for the whole family. Stops when your time is up. Join the FARM AND FIRESIDE family and be one of our two and a half million readers.

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Send us only 25 cents with this coupon or a letter, and we will send you FARM AND FIRESIDE till April, 1909, and the 500 pictures of Roosevelt besides, by return mail, postpaid. This offer is limited, and you cannot get FARM AND FIRESIDE with these pictures anywhere else on earth. Subscribe now before the price goes up!

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A SEED CORN PATCH
FOR EACH CRON GROWER.

Under average methods of seed selection in field conditions there is from year to year more or less deterioration in all varieties of corn. This "running out" or "losing in quality and producing power" of a variety is largely due to mixing and careless selection.

Corn growers are also finding that much trouble and loss is resulting from seed corn harvested late in the fall. They recognize that the best results can be obtained only when the seed is selected early and stored in a proper manner. For these reasons corn growers should employ methods in selecting, planting and harvesting which will give seed of the highest quality and strongest vitality.

One way in which every corn grower can do much to improve and maintain the quality in a variety of corn is by planting a seed corn patch. For this patch he should select about twenty-five of the best and most typical ears of corn of the seed to be planted this year. A germination test should be made of each ear in order that no weak ears may be planted. Shell off and discard the small and irregular butt and tip grains. Then shell the ears together and mix thoroughly. At the usual time of planting, plant this corn on the south or west side of the field to be planted with the same variety. This location should be changed if it be near a field planted with another

variety. Give this patch usual good cultivation, keeping the ground free of weeds and preserving a loose soil mulch. When the corn is five or six inches high, go through the patch and remove all weak or backward plants. Also when the tassels begin to appear, go through and remove them from all stalks which are either weak, barren, smutted, badly suckered or for other reasons undesirable. When the corn is mature and not later than October 15th, the seed should be harvested. Select the seed ears from the strongest stalks with a large leaf development and those bearing the ears four or five feet from the ground, and holding it in a right position.

Through the seed corn patch the farmer can do much to fix a desirable type in his corn and to reduce the number of barren, diseased and suckered stalks that appear in his field. It also furnishes him a convenient place from which his seed corn in the fall can be selected and he knows that it is from the best seed that he planted.—G. I. CHRISTIE, Purdue Experiment Station, Lafayette, Ind.

THE WAY OF COMMON
DAIRYING.

John Gould, the Ohio Dairy writer in the New York Tribune Farmer scores the shiftless scrub cow dairy farmer and points the improved methods with the improved dairy breeds.

A report of dairy operations in several states, compiled from the

actual returns of over fifteen hundred factories, creameries and shipping stations, show that the milk production of a great number of the cows of the country is less than 3,400 pounds a cow annually, while the cost of keep, gathered from the farm figures of 8,000 farms, is placed at not less than \$35 a cow when figured at market rates. This milk sells at about an average of 90 cents at the 100 notch—not far from \$31 a cow. In a cow census in Illinois conducted by Professor Frazier, of the experiment station, it was found that one dairy of 27 cows actually made more profit than have 750 cows in other dairies, delivering milk at the same market and price. Investigations along the same lines in the same territory show that there are cow by the thousand that are giving twice 3,000 pounds of milk a cow or more, returning their owners \$50 to \$70 instead of \$31. Is there any reason for this great variation?

The idea was prevalent that a "cow was a cow," and one was as good as another if fed the same; and that if one cow gave more milk than another, and for a longer time, there was no way to explain it except as "luck." The way cows were kept was a demonstration of the survival of the fittest; the weak cows died and the strong ones, hardy and vital, were the dairyman's flock when specimens of dairy breeds began to arrive from Europe. Four distinct breeds were introduced, and several other about which there is yet much dispute have their place in the dairy.

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The development of American Fence. The years of experimenting. The hundreds of thousands of dollars which we have invested in perfecting machinery and producing the grade of special steel to make American Fence what it is today.



That is a long story. What vitally interests you is the result of this great outlay of time and money. What you want to know is that:— We have succeeded in producing a special steel that is perfectly adaptable for fence making. By the use of this special steel, galvanized by our perfected process, the value of

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to the user is greatly increased. We firmly believe it to be as near absolute perfection as possible for the purpose. Wire drawn from the steel is hard but not brittle. It is stiff and springy but pliable enough to be properly spliced. It is live steel—not dead steel. So that every wire in American Fence as now made is a live wire, doing business all the time and— Always absolutely reliable against emergencies. Dealers everywhere—one in your town. See him—examine the different styles—test—compare—and judge the merits of the fence.

American Steel & Wire Co.,
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SOME CONSIDERATIONS IN JUDGING SWINE.

It is now generally recognized that there is a distinct relation between the conformation of hogs and their utility for certain purposes, and, owing to the greater difficulty of producing pork with high-priced cereals at a profit, a study of a standard for swine should be beneficial to all interested in breeding this class of live stock. It is generally recognized that swine are among the most profitable animals produced on the farm, if handled skillfully, and though vast improvement has been effected in the form and character of the carcass in the past few years, much remains to be done. A discussion of a standard for swine will therefore not be improper at the present time, and may serve to crystallize the half-formed ideas of many breeders into concrete conceptions of what they should seek for in selecting their breeding stock. It may also emphasize more clearly to the mind of the layman that the use of a larger number of sires of marked quality and possessed of desirable characteristics is a matter of serious import to them.

In discussing a standard for swine, it is well to bear in mind that it must of necessity vary somewhat with each particular breed. Therefore, it can only be taken up in a general way. It is also well to remember that there are two quite clearly defined classes of swine irrespective of breed raised in this country. The one type is known familiarly as the lard type and is a product of the corn belt of the United States. This hog is characterized by the free production of fat as a covering over the body and a large amount of lard, more particularly in the region of the kidneys. The other type is rather longer in the leg, somewhat flatter in the ribs, and similar in the body with a deep side, and the head is longer and more pointed. The type is now coming to be more generally known as the bacon type.

It will now be proper to proceed to a consideration of what may be termed a general standard for swine, and, if necessary, to later define the difference between the characteristics sought in these two general types, for it is the principles or fundamentals of swine production that concern the general reader. The score card for swine is based on a total of one hundred points divided under five general headings, the first dealing with the general appearance, the second with the head and neck, the third with the fore-quarters, the fourth with the body, and the fifth with the hind-quarters.

Scale of Points for Swine.

	Perfect Score
A. General Appearance:	
1. Estimated weight.....lbs., actual lbs.....	6
2. Weight according to age, 6-8 months, 200-250 lbs.....	6
3. Form, deep, broad, low, symmetrical, compact, standing squarely on legs.....	6
4. Quality: bone clean, hair silky, skin fine.....	6
5. Disposition quiet.....	4
6. Constitution vigorous, robust showing size and substance	5
B. Head and Neck:	
7. Snout of medium length and	

8. Eyes full, mild, bright and large.....	1
9. Face short, cheeks full.....	1
10. Forehead broad, high and full	1
11. Ears of medium size, fine and soft.....	1
12. Jaw strong, neat and broad..	1
13. Neck of medium length, thick	1
C. Forequarters:	
14. Shoulder vein full.....	1
15. Shoulder broad, deep and full; top compact.....	7
16. Breast full and wide.....	2
17. Legs straight, short and strong; feet medium size..	3
D. Body:	
18. Chest deep and broad; girth large.....	10
19. Sides deep, lengthy and closely ribbed.....	8
20. Back broad and straight; thickly and evenly fleshed.....	4
21. Loin wide and thick.....	3
22. Belly straight.....	2
23. Flank even with underline....	1
E. Hindquarters:	
24. Hips wide apart and smooth..	3
25. Rump long, wide, straight and evenly fleshed.....	4
26. Hams deep, wide and heavily fleshed.....	8
27. Thighs fleshed close to hocks.	4
28. Twist deep and plump.....	1
29. Tail tapering.....	1
30. Legs straight, short and strong; feet of medium size.....	4
Total.....	100

Among the more important considerations taken up under the first head are weight according to age, an important factor to be clearly fixed in the mind of the farmer who hopes to make pork production profitable.

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Cream Separators.**



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THE 1908 MODELS HAVE IMPROVEMENTS

which make the handling of milk still easier, quicker and more profitable. They do their work more efficiently, more economically than any other, and are built to wear. In spite of the fact that the demand is greater than ever before, and that dairymen everywhere are exchanging other makes for the reliable and efficient United States, the standard separator, we are prepared to make prompt deliveries anywhere.

Write to-day for "Catalogue No. 199, and any desired particulars
VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Distributing warehouses at: Chicago, Ill., La Crosse, Wis., Minneapolis, Minn., Kansas City, Mo., Omaha, Neb., Toledo, O., Salt Lake City, Utah, Denver, Colo., San Francisco, Cal., Spokane, Wash., Portland, Ore., Buffalo, N. Y., Auburn, Me., Montreal and Sherbrooke, Quebec, Winnipeg, Man., Hamilton, Ont., Calgary, Alta.

Many have their standard on this point entirely too low, due to the fact that the hogs are not of the right quality or not fed so as to keep them growing uniformly from the birth to maturity. There cannot be a very clear idea as to the proper conformation that should be sought in the hog or else there would be a smaller number of long-legged, long-snouted porkers seen on our farms. A good type of hog, whether bred chiefly for bacon or lard production, should have a deep, broad, low, symmetrical conformation, and while compactness is desirable, the middle piece of the bacon hog will, of course, be longer and deeper in proportion than that of the lard type. Quality is an essential and important consideration in swine and this is indicated by fine hair, thin skin and clean bone. Of course, the bone should be of sufficient weight to carry the body easily, but a coarse bone is indicative of poor feeding qualities and slowness in maturing. A quiet disposition is an important consideration in any breed of hogs. There should be every indication of a vigorous constitution, as shown by what are more familiarly known as size and substance and breadth and depth through the chest.

The snout of a well-bred hog will be rather short and comparatively fine. The Tamworths are somewhat of an exception to this rule, but it will not be improper at this time to say that though the bacon hog is not as smooth and symmetrical in appearance as the lard type, yet, if a representative of one of the well-defined bacon breeds, he is possessed of many attributes embraced under

the term quality, and is not an ungainly, long-legged, cathamned animal, as many have supposed. This idea has probably gained undue prominence in the minds of many breeders because of the success attending the production of hams in many parts of the South from a hog of a very exaggerated bacon type. While much success has attended the efforts of farmers who are producing bacon and ham from this class of hogs, it is generally recognized by those who are thoroughly familiar with the situation that improvement can be effected by the use of improved sires of the clearly defined bacon types on native stocks of the character under discussion.

Naturally, the eyes of a healthy hog will be full, bright and large. Small eyes showing a large amount of white are objectionable, indicating a bad disposition, which is not characteristic of animals that fatten advantageously. A well-defined and broad forehead, ears of medium size, a jaw that is strong, neat and broad, but not overpendant, a neck rather short, thick, wide and deep are all characteristics to be sought in the lard type of hog, and for the most part in the bacon type as well, except possibly that the neck is a little thinner and not quite so well developed as in the lard type.

An important point in any breed of swine is to have the shoulder vein, and full shoulder and a wide, full or what is sometimes called the neck vein, well defined. A broad, deep breast are important considerations in any breed. Locomotion being an important consideration so the animal can get around freely and gather food, particularly if he is to be fattened on grazing crops, calls for legs that are straight, short and strong. There is a tendency to weakness of bone in some of the pure-breeds, due, and well placed under the body. possibly, to a failure to give them as much exercise as is necessary to properly develop the bone, and to an attempt to secure over-refinement of bone on the part of the breeders. Activity and capacity to rustle, even at the expense of extreme fineness of bone, is a matter that should never be overlooked.

It is desirable that girth in the hog be large. The lard type will be more nearly round at this point than the bacon type. The sides should be deep, long and closely ribbed, and this is a characteristic that is especially emphasized in the bacon type because the utility of this hog depends very considerably on the character of this part of the carcass. The bacon hog should have a finely-blended flesh, characterized by what is familiarly known as a "streak of fat and a streak of lean." The lard type, on the other hand, will have a thick covering of fat over the body and the streaking of fat and lean will not be so well marked. Therefore, those who propose to breed the bacon type should give especial attention to the length, depth and character of the side, and especially to the quality shown in the slaughtered animal. It is, of course, true that the flesh of hogs of any breed will be influenced to a certain extent, by the character of food given, but this discussion presupposes that the bacon hog will be raised on grazing crops or on food in which protein elements predomi-



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De Laval engineers in all parts of the world during the past three years, are responsible for this fact. Every feature of the De Laval has been improved, from the supply can to the base. The new centre-balanced bowl with its separate spindle is alone a triumph in separator construction and must be seen to be fully appreciated. Then, there is the new one-piece "anti-splash" sanitary supply can, adjustable shelves for skim-milk and cream receptacles, new frame designs, and many other but less important improvements,—all combining to make the De Laval as nearly ideal as a separator for farm and dairy use can be made. There is the proper size machine for every size dairy from the smallest to the largest and no cow owner can afford to be without one of these improved machines. It will cost you nothing to see and examine the new De Laval and right at your own home too, if you will but say the word. Our new illustrated catalog describing the De Laval improvements in detail is sent for the asking. Write us at once and you will receive this interesting book by first mail with full information as to how you may have a free demonstration of the improved De Laval in your own home. It will pay you to do so and your only regret will be that you didn't investigate sooner.

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nate largely. A broad, straight back, slightly arched, but thickly and evenly fleshed, is always desirable, and a loin that is wide and thick is an essential characteristic of any good breed. The flanks should be low to the ground and the underline comparatively straight.

The hips should be wide apart, smooth and level. This is necessary to insure the development of a large ham, and as this constitutes the most desirable meat in the carcass these points cannot be emphasized too strongly, provided the symmetry and correlation of parts in the body are properly preserved. In other words, the over-development of any part is to be deplored, as it indicates inherent weaknesses, which it is not necessary to discuss at this time. A long rump, wide, straight and evenly fleshed, is an important condition, and, of course, the hams should be particularly deep, wide and heavily fleshed. An over-abundance of fat on the ham is not at all desirable, because the fat is, to a very considerable extent, a waste product, and the quality of the ham will be determined largely by the proper blending of the fat and lean. The thigh should be fleshed down close to the hocks so as to insure the production of a large, plump ham.

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important considerations that should be clearly fixed in the mind of the hog grower and he should strive by every legitimate means to secure them in the animals he is handling. Of course, the standard for the pure bred will necessitate the breeder giving attention to these points, but it is the general grower of hogs that is more in need of brushing up on what really constitutes a good ani-

(continued on page 10)

MOLASSES AS A FEED FOR HORSES.

The possibility of substituting for oats a mixed feed made up of 60 per cent molasses, 20 per cent corn feed, and 20 percent linseed meal was studied by H. van de Venne with army horses at Brussels, Belgium. Judging by the weight of the animals, he concluded that the normal ration made up of 12.13 pounds oats, 1.32 pounds bran, 6.61 pounds hay, and 4.41 pounds chopped straw was sufficient for their needs. When about half the oats was replaced with the molasses feed, somewhat greater gains were made than on the normal ration. The molasses ration had no marked effect on the amount of water consumed.

Molasses was an important constituent of the above-mentioned ration, and this material is attracting considerable attention at the present time as a feeding stuff for horses and other farm animals.

According to W. H. Dalrymple, of the Louisiana Experiment Station, who has studied the question in the Louisiana sugar plantations, "the custom of feeding molasses to the work stock on our large sugar estates has been adopted in anything like systematic manner only within the past few years. Previously, and when the price was extremely low, quantities of the material were run into large iron troughs, and the mules allowed free access to it; and, to some extent, this rather prodigal method still prevails. The true value of blackstrap as a food stuff has become more apparent of late years, however, and as the question of feeding economically has become one of considerable moment to our planters, it is being used more as an ingredient of the 'balanced ration,' and, as a rule, mixed with other concentrates."

The average consumption on 47 plantations in the sugar belt was found to be about 10 pounds per head per day, and the range, according to the statistics gathered about 2 to 21 pounds. A gallon of blackstrap molasses weighs on an average 12 pounds. Chopped hay, pea vines, alfalfa, and occasionally green cane

are commonly mixed with the molasses, and some concentrated feed lasses and the whole fed in three portions. It is desirable to begin with small amounts of molasses when this material is introduced into a ration.

CLARK'S ORIGINAL FIELD.

The above cut shows a section of the condition of Clark's Original Hay Field, from which more than one thousand tons of rocks were removed from each acre before the field could be sown to grass. From the 16 acre field, more than sixteen thousand tons of rocks were removed before the grass was planted, at a cost of nearly five thousand dollars. This work was done eighteen to twenty years ago, since which time the average growth of grass upon this field has been, two crops each year, seven to eight tons per acre, which has been marketed at an average of \$15.00 per ton and at a new cash profit of over \$60.00 per acre, for this long term of years.

On section of the field $\frac{7}{8}$ of an acre, eighteen years since seeding has produced 154 tons of well dried hay and paid me more than fourteen hundred dollars net cash profit above the cost of subjugation.

If the readers of your valuable journal would send me a two cent stamp to Higganum, Conn., I would send them full information how to produce such crops.

Yours truly,
George M. Clark.

An Illinois horseman advises feeding mares in foal a teacup of oil meal every day. Some veterinarians regard any kind of oil given to a mare in foal as very dangerous and instances on record show that they have died from eating flax straw.

The narrower the cut of the plow in soil free from all trash, the better the work, while it is just the opposite in plowing a field full of stubble and debris.



Cows' Relief is a specific Remedy for all troubles of bag and teats. It enables dairymen, farmers and other cow owners to keep their cows in a healthy and profitable condition. Cows' Relief is one of the most perfectly penetrating and disinfecting compounds in existence. It goes directly to the seat of the trouble, relieves the congestion and breaks up the bunches that prevent a natural flow of milk.

Twelve to twenty-four hours' time is all that is required to relieve any case of Caked Bag, if applied freely at the beginning of the trouble. It is excellent.

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For heifers with first calf Cows' Relief works in a most pleasing, prompt and successful manner. It relieves the soreness and swelling in the bag and is worth its weight in gold to every dairymen. It keeps the teats soft and flexible, and renders the animal quiet and docile.

H. O. Rice, Farmington, Conn., says: "Please send me two boxes of Cows' Relief. Enclosed find check for same. Please send at once. I wouldn't be without it in my stable." L. F. Cuthbert, Hammond, N. Y., says: "I have used your Cows' Relief and find it a very valuable remedy for Caked Bag."

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718 Chapel St., Lyndon, Vt.

BREEDERS' VIEW OF THE SITUATION.

A number of breeders have written us in regard to the condition of things in the hog business. Opinions that are out of the ordinary we give a synopsis of. They will show that the business is not dead and that it is as attractive to some people as ever; that a little squall does not knock them out.

"The pessimist never makes a success. Every business and every country that is in the column of success is made so by optimists. It requires a man to be broader than to think that every body has gone wrong but mine. Don't stand on the roadside and howl about any troubles. Little out of joint features can be smoothed out in a private way."

"There are always things in every business that we can find that need correcting. There has been a general lining up that would surprise you. Some of the faint hearted ones have perhaps run, but most of them are determined to correct any troubles. The wind has been let out of the inflated places in some instances, with a groan, and caused some of the prophets to cut for cover and attempt to put the blame on the other fellow."

"We have faith in the hog business and in the majority of the breeders, who are level headed. True, the business has been subject to some hard knocks in a business way; but can you tell me of any business that has not? The bankers were put to it and had to issue their notes—called 'em checks—for the time being; but everybody now will be busy to get business back into easy sailing, and the hog men should beat them all to reach it. Now you see if they don't."

A breeder from Oklahoma writes: "We are not in the fever district. I am selling pigs for real cash from \$15 to \$40, as good as are being sold at from \$50 to \$250, of the same breeding, at sales payable in notes. Some of these sales are managed in a way that disgusts people. I have attended some of the big sales and have seen men bid \$500 to \$700 and up for just medium looking hogs, but I did not see any money change hands, and I noticed more than once when a cull came into the ring they would—hello for Oklahoma to bid, just as though we people were only fit to buy the refuse, and when one of us fellows would bid, there were always other fellows to run the hogs up, on us, and I heard some of them say, 'Make them cash fellows pay the bill.' I just quit buying at these kind of managed sales. I got tired of going up against so much hot air. I sell to do the buyer good, and stand back of everything I sell, and expect to be in the business after this year."

Another writes: "We are glad to know that you are investigating sales and hope it will be done in a fair manner to all. Some of the averages that look very large would be considerably trimmed down if from one to a half dozen animals were taken out of the same that sold for an extra price, and some without noticeable merits to cause the price at which they were sold, but the anxiety to make an average that would outdo some one else, has been a part of the cause of this trouble. It is like

EVERY HORSE OWNER

Should Have the

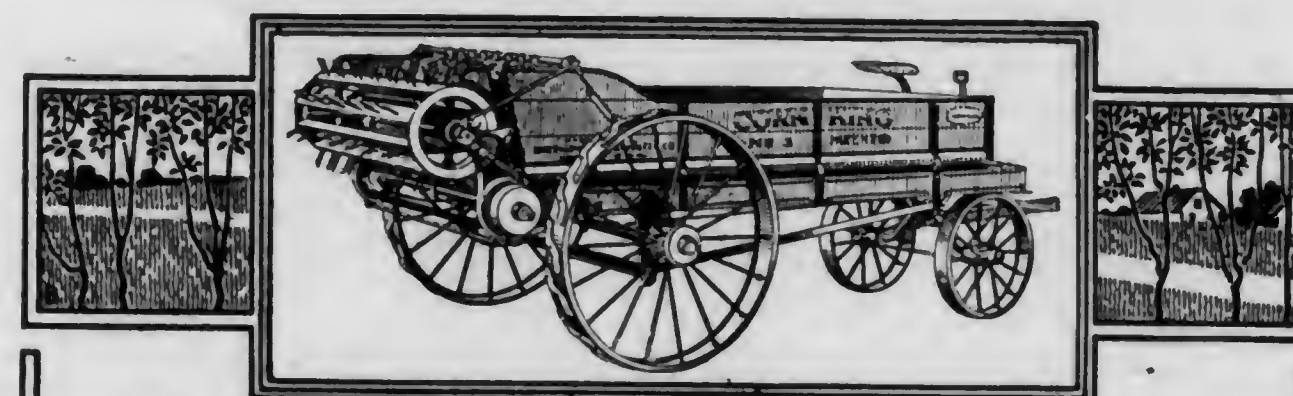


PILLING

First Aid Stable Case

It contains the following "Easy-To-Use" Instruments and Remedies with full "Easy-To-Use" directions. Can be used successfully by the owner himself. Every time it is used the price of the Case will be saved:

Price only \$15, prepaid. Actual value \$21.
G. P. PILLING & SON CO., Phila.



Make the manure bring you \$4 a ton

Thousands of Successful Farmers Are Doing It

There is no charm or secret about it. You simply spread it with a machine, and thus make it go twice as far, get twice as much good from it on the first crop, do your land more permanent good, and save half the time and labor of handling.

Manure is generally estimated to be worth \$2.00 a ton handled the old way. There is no doubt that it is worth twice as much to the farmer who spreads with a machine.

Three of the most practical and valuable machines manufactured for farm use today are the Corn King, Cloverleaf, and Kemp 20th Century manure spreaders. They are each made in a number of sizes.

These machines differ somewhat in construction and operation, but all three are right working and of great durability.

They are proven machines. They embody the best mechanical ideas, the materials used in construction are the best for the purpose, they are made as simple

as possible, and they handle manure in all conditions to the perfect satisfaction of users. Proof of all this is to be found in the record each machine has made in the field.

Is it not to your interest to own and use one of these spreaders on your farm?

Figure out for yourself and you must agree that it will be a paying investment, even if you do not have over twenty-five loads of manure to spread in a year.

You can't help but be pleased with the work, the easy handling, the light draft and the substantial making which saves you the annoyance of breakage and repairs.

Call and see these spreaders with the local International agent. He will gladly point out to you the superior features of these machines, as well as supply you with catalogue, colored hanger or other information.

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(Incorporated)

Chicago, U. S. A.



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You Pay No Freight To Try My Paint

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I sell my Paint direct from Factory to User—at very low factory prices.

You pay no dealer's or middleman's profits. I pay the freight on Six Gallon Orders or over.

My paint is so good that I make this wonderful fair test offer: When you receive a shipment of 6 gallons—or over—of my Paint, you can use two full gallons to test it.

If—after you have used the Paint—you are not perfectly satisfied with it in every particular—RETURN THE BALANCE OF THE PAINT TO ME—and the two gallons you have used won't cost you one penny.

No OTHER paint manufacturer ever made such a liberal offer. It's because my Paint is the finest Paint made—put up in the best way—that I can make such an offer as this. I go even further—I sell my Paint to responsible parties ON THREE MONTHS' TIME if desired.

I make three brands of Paint to suit the requirements of my immense trade.

My Strictly Pure All White Lead Paint is

absolutely the best high-grade Paint in the world.

My 40-60 Brand—Zinc and Lead Paint—is the best paint, in its class, on the market.

My Durability Paint has an immense sale everywhere and gives splendid satisfaction. This Paint is guaranteed for five years under an ironclad guarantee.

The Purity of all my Paints is guaranteed under a forfeit of \$100.00 IN GOLD.

All of my Paints are packed in Extra Size Gallon Cans—guaranteed to turn out a full gallon measure of Paint—my customers' insurance of full measure.

For further particulars about my Made-to-order Paint and my Plan of Selling, send for my Paint Book—the most complete book of its kind ever published. It gives full descriptions of my celebrated Paints—and complete set of large Color Cards to select from—the biggest Color Cards ever put into a Paint Book.

With the Paint Book I'll send you Free Book of all kinds of Painters' Supplies—sold at Direct-to-You Prices. Write me today. Get My Book and My Plan to insure you better satisfaction and lower prices on Paint.

O. L. Chase, The Paintman, Dept. 111, St. Louis, Mo.

Some Considerations in Growing Swine

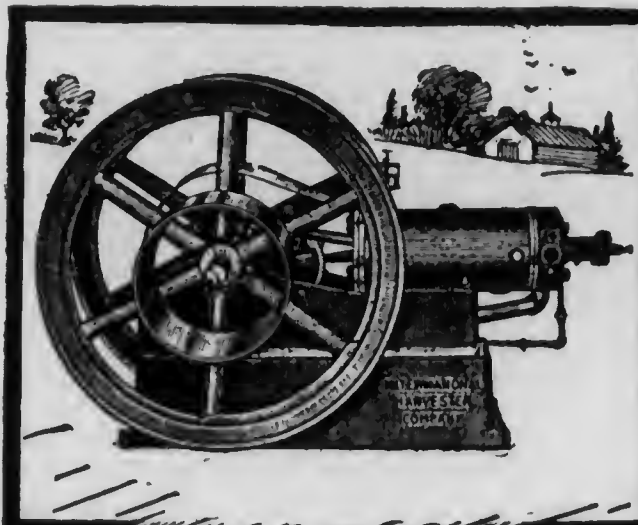
(Continued from page 7)

mal, setting his standard higher, and striving by every means within his power to obtain animals of superior quality whatever his purpose in maintaining them may be. Of course, in a short article, it is impossible to go into many of the fine points that might be taken up with propriety, but it is the general or fundamental considerations that must first be impressed on the farmer before improvement can be hoped for, and if he becomes interested in the study of animal form and its relations to economic production, he will quickly come to realize the value of many minor points which have not been mentioned in this article and the value of which he has probably not fully appreciated before.

There is a striking contrast between the lard and bacon types, and as there is a growing and discriminating market in this country for pork products of high quality, those farmers who are situated in regions where cereals are comparatively high-priced but where the legumes can be grown for grazing crops, thus insuring the cheap production of pork, should give more attention to the bacon type and study the qualities and characteristics sought more carefully, and by grading up on the native stocks obtain larger returns per individual animal in the yield of meat from the slaughtered carcass, and a better price because of the superior quality of the meat which may be produced by intelligent feeding without the use of any considerable quantity of high-priced grain.

In many instances where breeding is carried on without reference to proper ideals, a large proportion of cheap rough meat that sells for a low price is obtained. The same food fed to a different type of animals would produce a considerably larger amount of high-priced meat and affect the sale price of the hogs very materially.

The production of bacon hogs has not assumed large proportions in the United States, but, as already mentioned, there is a growing demand for animals of this character and this demand is likely to be accentuated in the future because of the rapid development of industries and a consequent increase of population in many sections where corn cannot be as cheaply produced as in the middle West. There will thus, in the near future, be a well-defined market for pork products of the highest type and quality, and it will pay farmers in various localities to develop a special grade of meat for a given market just as it now pays them to grow various kinds of truck crops and fruit. That a profitable industry can be built up in a short time has been markedly shown by the success attending the efforts of Canadian and Danish hog raisers in the English market, and it is desirable that breeders should study more particularly what the English market demands and a fair average of the prices obtained there for the various cuts. The English method of cutting varies considerably from that followed in Chicago, which is the standard for this country, a fact worthy of care-



A Reliable Power as a Farm Help

established a new order of things. Any one who will carefully consider the matter must see that they are money makers and money savers.

They make short, easy, pleasant work of what always has been hard, slow work. They save the farmer's strength, save him wages of hired men, save time, and enable him to do more work and make more money out of his farm than ever was possible before.

There is no doubt that on the average farm an I. H. C. gasoline engine will more than repay its first cost each year.

The nice adaptation of these engines to all farm duties is one of their most excellent features.

They are built in—
VERTICAL, 2 and 3-Horse Power.
HORIZONTAL (Stationary and Portable), 4, 6, 8, 10, 12, 15 and 20-Horse Power.

TRACTION, 10, 12, 15 and 20 Horse Power.

AIR COOLED, 1 Horse Power.

Also sawing, spraying and pumping outfits.

There is an I. H. C. engine for every purpose.

It will be to your interest to investigate these dependable, efficient engines. Call on the International local agent and get catalogues and particulars, or write the home office.



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Just write me a postal. Let me pay the postage to you on my Big 1908 "Split Hickory" Vehicle Book. Shows over 125 styles of Vehicles and how you can save \$25 to \$100 by ordering direct from my factories. My "Split Hickory" Book Free—also shows how I make any Vehicle you want to your order. Also full line of High-Grade Harness all at great saving prices. Address me personally—H. C. PHELPS, President, The Ohio Carriage Mfg. Co., Station 8, Columbus, O.

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AN EXTRA HEAVY FENCE
Every wire—both strand and stay—No. 9 gauge. Thickly galvanized. Best grade steel. We mail free sample for inspection and test. A more substantial, stock-resisting, time-defying fence was never stapled to posts. We pay freight on 40 rods. Write for book showing 12 styles. The BROWN FENCE & WIRE CO., Cleveland, O.

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15' 35 CTS. PER ROD DELIVERED



The April Reliable

ANOTHER VALUABLE SPRING NUMBER—SOME OF THE LEADING ARTICLES

Full Page Photographic Groups of Rhode Island Reds and White Plymouth Rocks—Artists Sewell and Schilling.
The Successful Management of Brooders—Associate Editor Woods.
Another Year's Breeding of White Wyandottes—Wild.
Answers to Numerous Questions on Incubation and Breeding—Symposium.
The Day-Old Chick Industry—Sperry and Groesbe, K.
Heating a Modern Brooder House—Rathbun.

Modern Rhode Island Reds—Tompkins.
The Breed Standard for Barred Plymouth Rocks—Fitch.
Poultry for Profit—Hinton.
Telling Sex During Incubation—Siddons.
Pleasure and Profit in Hantams—Fitch.
Getting Rid of Mites and Lice—Tyer.
A Profitable Pekin Duck Ranch—Curtiss.
Progress with Poultry—Roper.

The Usual Departments, etc. This issue will consist of 136 pages. March was the largest number published by any poultry paper—168 pages and cover.

Special Offer—Inclose 50 cents and this ad. and we will enter your subscription to June, 1909, and mail you this (April) number. Send for a free sample copy.

RELIABLE POULTRY JOURNAL,

Box 35,

QUINCY, ILLINOIS

ful note, for we have now learned that in entering an established market we must conform to the wishes of the class to whom we propose to cater if profitable returns are to be obtained.

This question of bacon production, while not one of wide concern in many sections of the United States, should not be passed over lightly, for there is a growing demand for the product of hogs that approximate the true bacon type quite closely, and this demand is bound to increase more rapidly as our people become familiar with the superior quality of meats which show a fine blending of fat and lean as compared with the over-fat bacon and hams produced from the exclusive feeding of corn. Furthermore, it may not be improper to mention that spring pigs raised on grazing crops can be made into profitable porkers at comparatively small cost by the late autumn and that they are more likely to be free from disease than those confined to pens. The Southern States afford one of the best opportunities for raising this class of meat of any section because of the ease with which we can grow the grazing crops and the length of time that these are available for grazing. We can make in this way meat at less cost than any other section of this country, and our farmers devote more attention to this branch of industry than they have hitherto done.

—ANDREW M. SOULE, in the Southern Planter.

RHODE ISLAND REDS.

The time is now ripe for poultry men and also poultry raisers to begin their work in earnest. To the many people who are about to invest in thoroughbred poultry, I wish to recommend to them the Rhode Island Reds. After several years' experience with the Reds I have concluded that no breed offers such a combination of useful qualities as this breed, and yet at the same time are so beautiful as to command the admiration of every passerby. At our poultry shows the Reds are getting more attention from visitors than any other breed.

I ask you all who read this article to consider the points of beauty in Reds, because it is the characteristic of a fowl that is famous far and wide for great results as a utility fowl. Being a very active fowl they do not take on fat easily and in this respect they are like the Leghorns, but have the advantage over the Leghorns in being much larger and a finer flavored table fowl.

The Red is especially a good winter layer; in fact, they lay better in winter and cold weather than in the summer months, being very heavily feathered. They are not affected by climate conditions. There are two things that the Reds fully enjoy—plenty of fresh air and light. The Red is a child of nature and demands only the simple arrangements in the way of food and shelter that are conducive to health and contentment.

To those people who want a fowl for profit or ornaments for the lawn there is no other bird that can fill the place better, but to that other class of breeders who think anything good enough for a chicken I would say leave Reds alone, or any other pure-bred fowl.

In conclusion, let me say to those who are just entering the poultry business, or contemplating doing so, select a breed that have all the requirements of the utility fowl and at the same time one for which the demand is large enough to enable you to dispose of your surplus stock and eggs at fancy prices; breed them to standard requirements and you will find plenty of willing buyers throughout the land. The Red hen never grows fat or baggy behind like many of the other breeds. Being light eaters and good foragers it is almost impossible to break them down by overfeeding.

A four foot fence is all that is necessary to confine them. The long breast bone and body indicate prolific layers, and if any variety of fowl ever attains a 200-egg mark, the Red will make it a close race.

The chicks make excellent broilers, feathers very fast and putting on weight rapidly, especially so when furnished with a well balanced ration. I prefer rose combs, as the single comb is just as good a bird except their comb is more liable to be frost-bitten in cold weather, therefore a single comb has to be confined more than the rose-comb variety in colder weather.—M. Elias.

A good gasoline engine is like a trust-worthy hired man—it does not need much watching. Just start it at the right time and it will attend strictly to business.

The best way to rid your property of sparrows is to blaze away at them now and then with a shotgun. The noise will frighten them away, and they will seldom return for any length of time.

If your boy is mechanically inclined, it pays to see that he has good tools to work with and plenty of encouragement.

There are many farmers who stick to the cultivator as a tool for getting stalk fields in shape for spring grain seeding. This is an old-fashioned custom. The disk harrow may not be any better, but twice as much time is saved by using it. One man does as much with the same number of horses and does it easier than two could do with cultivators.

Merchants and manufacturers take an inventory every year, and so should the farmer.

High-Grade Flower Seeds.
20 PACKAGES FOR 10c.

Kind	Kind	Kind	Kind
Aster, 16	Poppy, 18	Portulaca, 20	
Pansy, 10	Candytuft, 10	Four O'clock, 10	
Phlox, 10	Sunflower, 2	Marigold, 13	
Sweet Pea, 10	Zinnia, 12	Petunia, 10	
Salvia, 12	Larkspur, 6	Sweet Alyssum, 10	
Rose, 10	Verbena, 10	Nasturtium, 10	
Pinks, 10	Forget-me-not, 10	Calliopsis, 8	
	Sweet Mignonette, 10		

All of the above sent to any address, postpaid, for 10c. silver or six two-cent stamps. As a premium, and to introduce our seeds into every household, we will send a **COLLECTION OF FINE, BEAUTIFUL BULBS FREE**—with catalogue.

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THIS CORN QUESTION TOUCHES YOUR POCKETBOOK

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allowed on every bicycle we sell. We ship on Approval and trial to anyone in U. S. and pay the freight. If you are not satisfied with bicycle after using it ten days don't pay a cent.

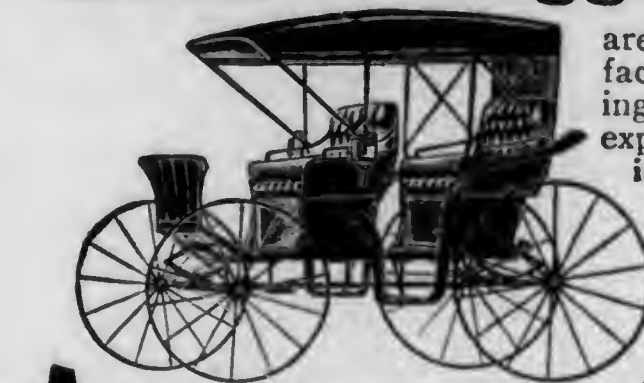
Factory Prices—Do not buy a bicycle or a pair of tires from anyone at any price until you receive our latest Art Catalog of high grade bicycles and sundries and learn our unheard of prices and marvelous new offers.

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are sold direct from our factory to the user. In buying from us you save the dealer's expenses and profits. **35 Years Selling Direct** is our record, and we are today

The Largest Manufacturers in the World

No. 315. Light Extension Top Surrey with Double Fenders. Price complete, \$78.00. As good as sells for \$85 more.

selling to the consumer exclusively. We ship for examination and approval, guaranteeing safe delivery. No cost to you if not satisfied as to style, quality and price. Over 200 styles of Vehicles and 65 styles of Harness. Send for new, free catalogue.

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ELKHART CARRIAGE & HARNESS MFG. CO.
Elkhart, Ind.



No. 656. Combination Buggy with double top style seat. Biko rear and extra spindle seat. Price complete, \$84.50. As good as sells for \$95 more.

LOW PRICES ON HIGH-GRADE VEHICLES AND HARNESS.

There are few business concerns in this country that have a stronger hold upon the public than the Elkhart Carriage and Harness Manufacturing Company. For over thirty-five years—over a third of a century—they have been manufacturing vehicles and harness and selling them, not to jobbers, wholesalers and dealers, but always direct to the people who use them.

Direct dealing would not alone have given them the hold they have upon the public. But they have dealt honorably. They have been manufacturing high-class goods and selling them direct on narrow margins of profit. People all over this country have learned to know this and the result is that the Elkhart Carriage and Harness Manufacturing Company now enjoys the proud distinction of being the largest manufacturers in the world doing business direct with the people.

It goes without saying that we think it one of the best places in the country to buy vehicles and harness. The vehicles and harness are known everywhere as high grade. As to prices, no one can read the advertisements regularly appearing in this paper without being convinced that they are right.

The Company's great catalogue shows 200 styles of Vehicles and 65 styles of Harness. The time honored Elkhart plan is to send everything on approval. It costs you nothing if you are not satisfied on style, quality or price. Write the Company for the big catalogue, at Elkhart, Indiana. It means the saving of from a third to a half on the price on everything you may want to buy in the vehicle or harness line.

Some farmers cannot make up their minds when to sell a farm product. This story (a true one) of a Vermont farmer is indicative of this. The Vermont farmer had several hundred pounds of butter at the beginning of the holiday season, on which he put a price of 35 cents. As the price advanced to 35 he advanced to 40. At 40 cents, he wanted 45. He was finally able to secure it, but then he wanted 50. Spring came on soon and butter prices fell all the way down to 25 cents in a hurry, leaving the old farmer deacon to sell at that figure. Though this happened years ago, the practice of holding too long for a higher price is still common.

The disc harrow is one of the greatest farm tools we have. By its use, we are enabled to get our stalk fields in shape for spring grain sowing in short order, with little help. After the spring grain is in the uses for the disc do not come to an end. On this farm there is often much corn land plowed early. This needs some surface working before planting, as rains usually pack it some and weeds begin to start as the weather warms. The disc harrow is the right tool in the right place on this proposition. We would much rather have the weeds start early than not, for the disc completely gets away with them and the field is ordinarily clean throughout the summer.

Stupendous! Extravagant! Marvelous!

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\$1,000 ACCIDENT INSURANCE POLICY of the NORTH AMERICAN ACCIDENT INSURANCE CO. with a Capital Stock of \$200,000. It has no deposit \$100,000 with the Insurance Commissioner for the payment of losses. The Policy pays as follows:

For Loss of Life.....\$1,000.00 For Loss of One Hand and One Foot.....\$1,000.00
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THIS ACCIDENT POLICY FOR \$1,000 is fully paid for one year, without any dues or assessments of any kind. This is a limited policy but covers a wide range of risks, including death or injury on railroad trains and other public conveyances, elevators, trolley cars, etc.; also accidents on the high road, from riding or driving automobiles, horses, etc.; burning buildings, hold-up, drowning, bicycle accidents, etc.

\$5.00 A WEEK IF DISABLED will be paid for a number of weeks if you are disabled in any way described in the policy. You can have the paper and policy sent to different addresses if you desire.

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Christ's Last Moments on Calvary

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In addition to the \$1,000 Accident Policy, the great picture Golgotha and Holden's Corn Book, we give TWO YEARS' SUBSCRIPTION TO THE AMERICAN FARMER, of Indianapolis, the only Literary Family Farm Paper published in America, and one year's subscription to the Farm News, of Springfield, Ohio, one of the most practical, scientific farm papers in the nation.

ALL OF THESE FOR ONLY ONE DOLLAR

The Postoffice Authorities at Washington have decreed that all subscribers of a monthly paper who are four (4) months in arrears must be cut off. So if you are in arrears to this paper you had better send in at once and get the benefit of this stupendous offer before the supply of policies and pictures is exhausted. Address:

AMERICAN FARMER COMPANY, INDIANAPOLIS, IND

BUYING AND SELLING HORSES.

A Chicago paper devoted to the commercial side of the horse question tells how horses are handled in that high market:

The distribution of horses to consumers has become an immense industry. The great teaming interests of cities are supplied with equipment by professional dealers who either purchase their supplies in the country or at some wholesale market, the latter being the principal source of supply. The consumer cannot afford to lose the time necessary to canvass the country to purchase the horses direct from breeders and relies on the professional dealers in all classes of commercial offerings for necessary supplies.

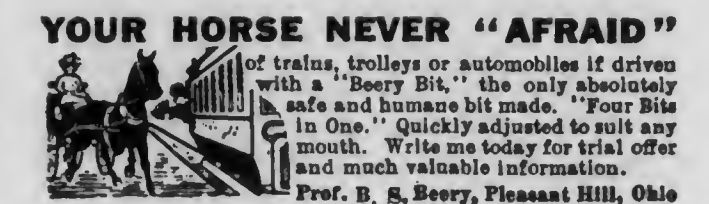
Dealers prefer to purchase their horses at wholesale markets on account of the wide range of classes and the volume of consignments. At the Chicago market 2,177 horses have been received in one day, 4,768 in one week, 18,448 in one month and 127,250 in one year. The immense volume of daily receipts of all classes of commercial offerings at the Union Stock Yards makes it an ideal point for professional operators to obtain their supplies. This market has an international reputation of being the largest distributing point of horses in the world. More horses are annually purchased here for the eastern trade and export than all the other domestic markets combined.

The consumers of horses are timid buyers and prefer in most instances to place their orders with dealers who are expert judges of all kinds of industrial offerings. To tell correctly the age and soundness of a horse requires wide experience. There is supposed to be more deception embodied in horses than in any other class of domestic animals. Many horses are afflicted with vices that are concealed at time of purchase and unless the animal is guaranteed at the time of sale it may turn out a counterfeit and the buyer suffer a material loss. On account of the difficulty of selecting the right kind of a horse and determining his soundness and commercial qualities consumers prefer to pay a bonus to reputable dealers to execute their orders.

From all the great metropolitan cities of the East are assembled every week 100 to 200 horse buyers purchasing supplies for their customers. They inspect horses more closely in a minute than a novice could in eight hours. Their losses in acquiring their experience have made them adept in discovering every defect in an animal when offered on the block or at private sale. Blue eyes, cut wind, spavins, stringhalt, splints, sidebones, curbs, and blemishes that depreciate the value of the horse they are able to discover almost by intuition. Even a cribber, weaver or halter-puller can be detected by experienced dealers where the novice would overlook these equine vices.

In the old days, to call yourself a farmer was to brand yourself an undesirable citizen in the eyes of many. Now, the fever for land and for the independence of the landowner is penetrating all circles of society. The land-owners are the coming aristocracy of the world.

It is a mighty good thing to have an extra lantern globe handy, where you can get it and won't have to stumble about in the dark doing chores.

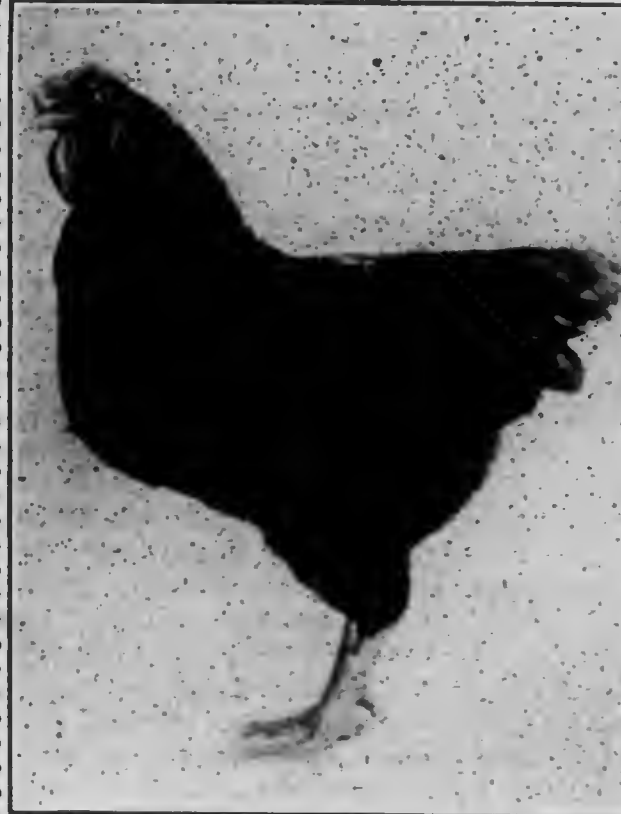


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POULTRY WORLD CO., Heron Lake, Minn.

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Send for Circular
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Wm. R. MORRISON,

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1st Cockerel at Boston 1907.

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Rose Comb R. I. Reds

Winners at the Nations Largest Shows

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Send for Mating List

ROBT C. TUTTLE

197 Blue Hills Ave. Dept. A
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TO RAISE OR TO BUY STOCK CATTLE

When cattle are kept primarily to consume the rough feed of the farm, such as pasture, cornstalks, straw and hay, cows can often be economically maintained simply to raise calves. Even if the calves are fattened and maintained, the cows, calves and yearlings not in the fattening pen will consume an immense amount of rough forage not needed by the fattening steers. During a period of six months of heavy grain feeding, steers will eat from two to four times as much grain as forage.

Where whole shock corn relied upon to furnish all the roughage that steers will eat when on a full feed of grain, it would supply only half their grain. For example, a carload of steers fed at Ames last winter required an average of 26.4 pounds whole shock corn daily per steer to furnish all the rough feed they desired. Of this amount 13.28 pounds was ear corn, and in addition each steer ate 13.32 pounds of other grain—ear corn, oilmeal and bran. About one-fourth the weight of the shock corn was coarse stalks, which the steers did not eat, so they actually ate about four times as much grain as roughage.

Breeding cows, on the other hand, can be maintained on rough forage alone through the winter, with no increased weight except that due to the developing of the calf. With a small grain allowance of two or four pounds of grain per head daily in addition to the 15 to 20 pounds rough feed each will eat daily, they will maintain a thrifty appearance and gain in body weight. Young cattle, if in good condition in the fall, can be carried through the winter with a steady, economical growth on a very small grain ration if it is of a nitrogenous character. I have had good success wintering yearling stockers on gluten meal and corn, one pound each per steer daily, with corn stover and straw. Oilmeal or cottonseed meal would doubtless do so well. Stock steers so fed gain slowly but steadily all winter, while if wintered on corn stover and straw alone they will shrink 50 to 100 pounds per head.

With these facts in mind, it is apparent that where land is well adapted to raising corn and is so located near enough to good markets, so that hay and straw are high in price, fattening steers may often be most nearly what is wanted to market the products of the farm to the best advantage. Where land is rough, untillable and cheap and far from good hay markets, there is plenty of opportunity for economical raising. A shipper from central Missouri with 12 cars of cattle mostly of his own raising, on the train for Chicago some time ago, told me it cost him just \$9 per year to keep a cow and to raise her calf to weaning time. This man's cattle sold within a few cents of the top of the market for the day. It was profitable for him to raise his feeders.

RAISING CALVES FOR BEEF.

The difficulty of buying steers of good quality at any price makes it desirable to raise them whenever practicable. Aside from an additional expense of \$1 to \$2 per calf for a

good, pure-bred sire, calves of the best type can be raised as cheaply as inferior ones. The good calves will make gains in weight as cheaply as the poor ones, and will sell for 50 cents to \$1 per 100 pounds, or \$6 to \$14 per head more on the market than the poorer steers. Even if the poor calf can be bought \$4 to \$5 less than the cost of raising the good calf, the latter is still a source of more profit and more pleasure to the feeder.

Where calves are raised for beef in the corn belt states, the small farmer can more conveniently fatten them as yearlings than to keep them longer. In order to raise a carload of two-year-old steers each year one would have on the farm about 40 cows, 40 two-year-olds, 40 yearlings, 40 calves. If he shipped a carload each year of two-year-old steers and heifers together, he would still have too many cattle for the average farm. If calves are pushed from the start and sold fat as yearlings, 25 cows, 25 yearlings and 25 calves are all that need be on the farm at one time. By this plan, too, the heifers will sell readily with the steers without greatly lowering the price.

Where the cost of maintaining a cow is too great to be paid for by the calf alone, the dual purpose cow gives the solution to the problem. In such locations, dairying is invariably a paying business. Now, the beef conformation can be combined with milk producing powers. Scattered individual cows throughout America both grades and pure-bred, are paying propositions at the pail, giving upward of 5000 pounds of milk per year, and at the same time are of the wide, square, low-set, heavy muscled type, and put on fat rapidly when dry. Such cows are found in England in large herds. They may not produce calves of the extremely perfect beef type. That is not necessary in order to secure the highest market price. Recently the steers from Ames, which were considered not good enough for show purposes, were sold, topping the Chicago market by 65 cents per 100 pounds. Cows of the type described can raise their calves on new milk and still have half of their yield of milk to be sold or to make over 100 pounds of butter per year. Such cows are rare in America, but the few there are should be cherished. They have greater money making possibilities for the average farmer than anything else in the cattle line. The farmers in the corn belt are surely coming in time to seek for this type of cow, and those who realize it first and get busy will be the most fortunate.

At present, with the great western plains raising calves which they have not grain to fatten, there is a supply of good stock and feeding cattle which can be bought at paying prices. They can be secured just when needed, and the capital invested can be turned over often—from once to three times a year. These cattle, with big, thin frames, are in shape to make the most rapid gains on feed. Thin steers of good quality are often a losing proposition for the producer, because they have been maintained a long time, making very slow gains, and often for long periods losing instead of gaining weight. For the buyer they are money-makers for their big frames and big digestive

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apparatus enables them to make faster gains than a steer whose equal weight is largely flesh and fat.

The buying of stock and feeding cattle appeals to the speculator. He must be content to do without cattle if he cannot buy them cheap, or else he must run the risk of a heavy loss. The raising of calves from birth until fattened is an enterprise that engages the interest of the man who is building up a permanent plan for operating his farm. As L. H. Kerrick used to say, "He does not fatten cattle; he grows beef."—E. T. Robbins, Iowa Agricultural College.

To wean a sucking cow, put on a halter, then a surcingle just back of her front legs, and fasten one end of a stick to her halter, the other end to the surcingle and place between her front legs. She can eat and drink but can't reach around to suck herself.—G. S. Nugent, Liscomb.

One of our old folks gets warts off this way: Clean the udder with a mild creolin solution, about a teaspoonful of the creolin and a bucket of water. Then cut off the warts with common scissors or knife, touch their roots with a pencil of silver nitrate and keep udder and teats soft with lard.

Lead a cow by making a rope halter and tying her to the wagon. Let rope extend from the wagon backward over her hips, fasten to the tail and then bring forward to wagon again. With a strap or small rope fasten the rope in such a way it cannot slip off her back.—W. W. McColloch, R. R. 2, Hot Springs, Ark.

Some of our greatest failures come from not being ready to do our work when it ought to be done; let's be ready. And yet it takes grit, sometimes, just to sit still and wait for lard to dry off before starting the plows. It pays, though. Land ploughed too wet may be spoiled for a good many years. It bakes, lies hard, and is unprofitable.

THE ABORTION SCOURGE.

It is asserted by Dr. David Roberts, State Veterinarian of Wisconsin, that Abortion is the most destructive of all cattle diseases. That this fact is not universally recognized he attributes to another fact, that the disease itself is not generally recognized nor its losses properly computed.

Even in tuberculosis, a cow may be affected for some time and still produce healthy calves. But the abortion infected cow loses, first her calf, second her flow of milk, thus becoming herself a non-producer and a net expense.

Dr. Roberts has further observed in his twenty years' practice and in his official capacity, that ninety per cent. of all tuberculous cows slaughtered are also infected with abortion. It is hardly to be disputed that the work of the abortion germ in many cases prepares the way for the spreading of tuberculosis among herds.

Dr. Roberts has compiled in book form the results of his experience. The volume is called "The Practical Home Veterinarian" and is all its name indicates, giving, as it does, descriptions, symptoms and treatment of all live stock diseases. However, it deals most comprehensively with abortion and the serum treatment discovered by Dr. Roberts himself. It is shown that hundreds of herds have been treated with this Anti-Abortion Serum successfully and not one failure has been recorded.

This book, bound in cloth, completely illustrated, can be obtained by anyone owning cattle and other live stock if the owner will write, stating the number of live stock he owns of different varieties, and enclose ten cents to the Dr. David Roberts Veterinary Co., 000 Grand Ave., Waukesha, Wis.

WILD HORSES.

From the New York Tribune.

Wild horses by the thousands are over-running the government National Forests of Nevada and neighboring states, and the authorities in Washington are besieged with petitions from stockmen and farmers begging them to put a stop to the nuisance. A recent dispatch from Reno conveyed the intelligence that there are fifteen thousand of the untamed beasts upon the Toiyabe, Toiyabe and Monitor forest reserves in Lander county alone, and that orders have been received by the forest rangers to begin a systematic war of extermination upon them. This dispatch, although twisted as to facts, does not exaggerate the number of horses now supposed to be roaming at large in the districts mentioned. As a matter of probable truth there are a good many more than fifteen thousand wild horses in Nevada and the neighboring states, and every herd is a pest to the owners of vegetation and domestic stock.

The part of the Reno telegram which is not true is that relating to the orders sent from Washington. Neither the forest rangers nor any other employees of the government have been told to destroy the horses, and unless they do receive such orders they will confine their energies to fencing crops from the trespassing animals or rounding them up when they appear and threaten damage to the range. Indeed, if half the stories brought to the capital are true, all the rangers in Uncle Sam's service would have little chance of destroying the big herds that are roaming over the Western states.

Within the last few years they have increased to such an extent that in many localities they are classed as "varmints," with wolves, wildcats and grizzlies, and every man's rifle is turned against them. No fence is strong enough to stop these horses, and when they appear in force they have even been known to knock down and kill cows and calves. After each visitation from a herd the ranchman is likely to mourn the loss of his domestic horses, and it requires only a few days' association with their new companions for the best broken animals to become as wild as their nomadic comrades.

A study of the wild horse problem brings to light many interesting facts about the animals. The Legislature of Nevada, it seems, passed a law many years ago specifically allowing hunters to shoot wild horse.

(continued on page 15)

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Where a family has one cow, butter is frequently bad. This is due to keeping the cream too long before churning. The new cream is mixed with the old and the butter is not good. This can be avoided by more frequent churning.—M. A. M., Michigan.

Rightly used stock food is a good thing for stock and poultry as well. When using it don't imagine you know more about it than the manufacturers, feed according to directions, and don't buy old stuff that has been laying around for months. W. W. Jones, Licking, Mo.

BLOODED STOCK for April—1908.

A 1 by 14 piece of soft pine cut into pieces 11 inches long, nailed together in the form of a box, makes a good stool. Then nail braces diagonally on each side, giving you a four-sided stool, well braced, and one that will last for many years.—G. B. Gafford, Sarpy county, Nebraska.

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THE CONTRIBUTORS

Among the many famous men writing for Farm and Fireside, in addition to Mr. Greiner, Mr. Fred Grundy, and all the other well-known Farm and Fireside editors, the following are a few:

Dr. L. H. Bailey, Dean of the New York State Agricultural College and writer of various books on agricultural subjects.

F. D. Coburn, Secretary Kansas Department of Agriculture.

Dr. M. A. Scovall, Director of Agricultural Experiment Station of Kentucky.

Prof. G. I. Christie, of the Indiana Agricultural Experiment Station.

John Craig, Professor of Horticulture, Cornell University.

Charles S. Plumb, Professor of Animal Husbandry, Ohio College of Agriculture.

Dr. H. J. Water, Dean of the College of Agriculture and Director of Agricultural Ex. Station of Mo.

Dr. E. A. Bryan, President of the State College Washington and Director of the Experimental Station.

Prof. C. O. Bull, Assistant in Agriculture, University of Minnesota.

R. A. Moore, Professor of Agronomy, University of Wisconsin.

Isn't this just about the best list of farm writers you ever saw? But these are not by any means all the good things in store for our readers. There is

THE REVIEW OF THE FARM PRESS

This is only one of Farm and Fireside's twelve to fifteen departments, but it alone is worth far more than the price of the whole paper, because it gives in concise, readable, boiled-down form the best things from every other farm paper. If you have the Review of the Farm Press, you won't need any other farm paper, because it embraces them all.

FARM MANAGEMENT

will be a new department in Farm and Fireside this coming year. They will strive to make it earn and save many dollars each year for every Farm and Fireside family. It will deal with the business side of farming—something about which farmers can all know more, and which means dollars in their pockets. It will show, among other things, how money—lots of it—has been made in every kind of farming, by methods which you have never thought of, perhaps. "Farm Management" will be something different from what any other farm paper publishes.

FRUIT GROWING

Mr. S. B. Green, who conducts this department in Farm and Fireside, is a recognized authority on fruit growing. Perhaps your orchard is not bearing as it should, and you don't know why. Do insects ever trouble your trees? Farm and Fireside will clear all this up for you in a plain, practical way. You'll find it mighty helpful.

GARDENING

The garden is a prolific source of revenue to any farmer, provided it is handled properly. To handle it properly means dollars in your pocket. That is just where you will find the "Old Reliable" Farm and Fireside most helpful. The gardening pages are carefully edited, and are filled with the most helpful and useful hints.

THE GRANGE

No organization in this country is doing a greater good than the Grange. It is the clubhouse of the country, the one place where the members can meet for social chat and conversation. No farm paper in America is more valuable to the granger than Farm and Fireside, because Farm and Fireside is with the farmers through thick and thin. It devotes at least one page every issue to Grange news.

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During the coming winter, Farm and Fireside will print a half dozen or more of the most interesting articles that farmers could possibly read. We purpose to take you right to the homes of some of America's most famous farmers—men who are known the country over—and show you not only how they run their farms, but how they live in their homes too. These articles will be called "Well-Known Farmers and Their Homes," and will deal with men who have given the best of their lives to working for other farmers. Don't miss them!

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Blooded Stock, - - Oxford, Pa.

BLOODED STOCK for April—1908.

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The Hog Worm is the Most Dangerous Foe of the Hog

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It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

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20 choice Spring Sows, open; 25 Fall Pigs both sexes, and also some very fine yearling bred sows that are extra fine and were prize winners last Fall. 12 head Poland-Chinas from 8 to 12 months old. I never had a better offering in young sows than this.

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P. F. HAMILTON, Cockranville, Pa.

The data collected are in accord with the generally accepted view that molasses, when it is available at reasonable prices for feeding purposes, constitutes a wholesome and easily digested, as well as an economical constituent of a ration for draft animals. "It would seem that the somewhat general impression that molasses, from any source, is unduly laxative, must have been placed upon the effect produced by the by-product from the beet factory, and not sugarcane molasses, as their is abundant evidence in our own State of the harmless effect of blackstrap, so far as a purgative action is concerned."

Molasses, as everyone knows, owes its nutritive value largely to the sugar which it contains. A French investigator, who studied the feeding value of beet molasses, states that experimental evidence shows that sugar did not appreciably diminish the digestibility of the nutrients of a ration when the amount fed to horses was equal to 5 or 6 pounds per 1,000 pounds live weight. Syrup and molasses, however, when fed in smaller quantities, decreased the digestibility of the ration, a fact which is explained by the laxative properties of the alkaline salts in beet molasses. The general conclusion drawn from the experimental evidence summarized by this investigator, however, was that beet molasses is a wholesome and hygienic feed when the amount consumed per day does not exceed 6 or 8 pounds per horse.

FARM NOTES.

The memorandum book is a mighty good thing for the farmer to use in the busy season. Get one that may be carried conveniently in the pocket, with a place for a pencil in it.

Labor-saving devices are doing away with the greater part of the outside drudgery of the farm, but the farmer will always need his energy.

There is one crop produced in a weedy field that most farmers fail to take into consideration and that is rabbits. Harvest it while the season lasts.

Give the young colt some oats. There is nothing better for growing animals, especially equines, than oats.



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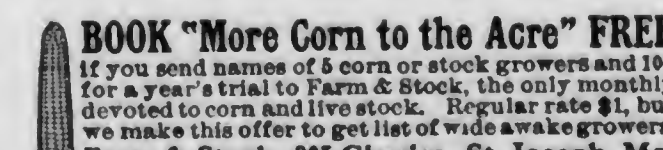
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WILD HORSES

(continued from page 15)

ses and to sell their hides for what they could get in the open market. The law opened a way to a new and unusual industry, and many men found the killing of wild horses very profitable. Besides the work was exciting and gave the business the added zest of sport.

As the time went on and the business of killing these "outlaws" (as the wild horses were often termed) on the ranges assumed greater and greater proportions, stockmen found that the professional hunters were, in many cases, abusing their rights and were killing branded and shod horses. This put an end to the business, for on complaint of the stockmen the Nevada Legislature promptly repealed the law. It is estimated that 15,000 animals were killed during the time that the law was in force. This figure gave the basis for last week's story.

The report, however, had good basis of fact, for the wild horse question has grown to be as serious in the last few years as it was when the Nevada Legislature was forced to enact the old law. The United States forest service has not given orders for the killing of a single horse because it has no right to do so. The forest officers of the Nevada national forests realize how bad conditions are, and will do anything to assist the stockmen to put down the nuisance.

Anyone who finally discovers an effective method to settle this problem will have done a great service for the stockmen of every state west of the Missouri River. As an old and experienced stockman, now in the employ of Uncle Sam, said of the wild horse problem: "Theoretically it seems a very simple matter to handle, but practically it is quite the reverse." On the ranges of many of the national forests the supervisors have been at their wits' ends for several years trying to devise a method to meet the difficulty. Apparently an entirely satisfactory method can not be found because of the inadequate estray laws now enforced in the different states. Under the circumstances, the following plan has been recommended to meet the conditions in the national forests:

"If the presence of the horses is seriously damaging the national forest range and public sentiment favors such action, the supervisor may, upon petition of a majority of the permittees of a grazing district, allow the horses to be gathered and disposed of according to the state or territorial laws. In such cases the forest service will, upon recommendation from the supervisor, co-operate in the construction of corrals or fences for the purpose of capturing the horses.

"Forest officers may drive unpermitted horses from the national forests at any time, but if the owners of the horses are known and ownership acknowledged the owner should be allowed to adjust the matter by paying the grazing fee. If he refuses to apply for a permit, then a trespass charge should be brought against him and the case conducted according to instructions.

"Unbranded horses may be handled

according to the state estray laws, but forest officers can not be allowed to gather such horses for the purpose of using or selling them, nor can they be allowed to collect any remuneration from any person for corralling unclaimed horses. The policy of the forest service will be, therefore, to co-operate with the stockmen of the state or territorial authorities when they take the initiative in disposing of wild horses in the national forests, but the present laws and regulations do not admit of independent action by the forest service.

The wild horse problem is only one of many which stockmen have to contend with which the government is trying in one way or another to solve on the ranges of the national forests. Predatory animals, such as wolves, coyotes, mountain lions and wildcats, do thousands of dollars' worth of damage to stock each year in all parts of the country. On some ranges forest officers have to contend with rustlers, who sometimes succeed in stealing the great part of the stock which the predatory animals do not kill. Poisonous plants are another nuisance which give the stockmen considerable trouble in many parts of the country.

Uncle Sam has always shown a disposition to co-operate with the stockman in combating these nuisances; in fact, he is doing better than merely meeting the stockmen half way in the work. On many of the national forest ranges for the last year rangers and guards have been assigned to the work of hunting and trapping, with the sole aim of killing off the animals that prey upon the stock. The work has met with marked success, and hundreds of wolves and coyotes have succumbed to the bullets and poison of the hunters. Each animal killed means a decided saving to the sheep industry, for it is estimated that one wolf averages about \$1,000 damage each year.

Forest officers are co-operating with the stock associations to stop the stealing of livestock and run the rustlers out of the country. The war on poisonous plants has been carried on for more than a year by the forest service, in co-operating with the bureau of plant industry, and, while the investigations have just begun, it is already seen that their growth can be checked in many states.

If it is possible to check the wild horse nuisance as easily as the other troubles which have bothered the stock interests, both the stockmen and forest officers will find the Western ranges rid of another serious drawback which helps retard progress in the business.

Good clover hay, corn and oat rations, warm and dry quarters salt, with water at hand, and regular feeding, are about all healthy lambs need for best results, unless a daily ration of roots is added, which will help to keep them well.

Many sheep raisers have an idea that sheep should be fed succulent foods and a variety only for a few weeks before the lambs are dropped. This is a mistake, particularly when the economy consists of making the food for the early part of the winter dry fodder. Sheep may exist on such rations, but they cannot thrive on

BLOODED STOCK for April—1908.

them. As a rule, timothy hay is not good as a dry fodder for sheep. A flock will give much better results by using corn stover and feeding liberally of succulent foods, such as turnips and mangels mixed with a little wheat bran. By this feeding early in the season less grain is required, even at the time when it is fed more liberally, two months before the lambs are to be dropped. It does not pay to work on the idea that the sheep have gathered on the pasture enough fat and muscle to carry them through several months on starvation rations.

A great many farmers cannot see the need of fire insurance until after their buildings go up in flames.

Every day some means of utilizing by-products is discovered. There is often as good a chance to increase an income by turning waste to resources by looking for new fields for enterprise.

The average farmer discovers sooner or later that the old thick-walled straw shed for his stock is about the best, despite all that is said to the contrary.

If fence posts were made of cement

HORSES

Going Blind, Barry Co. Iowa City, Ia. Can Cure

PURE BRED SEED CORN

The kind that grows and makes a big crop. Also pure bred Duroc-Jersey Swine. Book and Prices free.

MEADOWBROOK SEED FARMS, Williamsport, Ohio.

Registered Jersey Bull, 2 years' old, son of Dictator and the best of blood, a perfect animal—price and picture upon application.

MISS NICHOLSON, 110 Walnut St. Philadelphia, Pa.

Registered Duroc Swine, Bred Sows \$13. Stock of all ages for sale.

WM. HARSHMAN, Thurmont, Md.

Registered Duroc Jersey Hogs for sale at panic prices. Beautiful gilts bred to farrow this month and next. April pigs. Address, ROBINSON BROS., Myers, Ky.

EGGS

From Beauty and Utility Strain of B. P. R.

Exhibition matings \$2.00 for 15 eggs

From good laying strain \$1.25 for 15 eggs

D. N. RIEGER, Hyndman, Pa.

GRIFFIN'S



Growing Better Every Day

Best Spring pigs we ever raised. Offer single pigs, or in pairs and trios not akin Some choice boars now ready for service.

C. M. GRIFFIN, Charleston, Ill

BLOODED STOCK for April—1908.

a lot of labor with the sixteen pound sledge could be saved.

The farmer should take great pride in his trees and make a habit of planting a given number every year and preserving them.

It is better to have a small farm all your own and work it all your self, than to have a large one burdened with debt.

The Way of Common Dairying

(continued from page 5)

While a certain number of dairymen saw the superiority of these new breeds and have kept them pure and distinct, allowing no cross-breeding, thousands of other dairymen sought to improve (?) their herds by mixing in the new types, first one breed then another; used grade sires of these mixed breeds; diluted the fresh blood below any possibility of its having any visible influence; discarded belief in there being such a thing as dairy temperament or line bred heredity, and have continued on to this very day with the 150-year-old plan of mixed breeding. These very men will contend for hours that speed in a horse comes by form and adaptation and that both are secured by breeding strong qualities for generations, and the same of draft horses and so on down through the list, but they shy at believing that generous milk giving is secured by maintaining the same plan of breeding. When confronted by a well bred dairy and large milk yield and heifers as good as their dams, doubts and "disbeliefs" are plenty to excuse themselves, and they hold that "milk goes in all forms," and what they know about dairying is more practical than that found in books and paper and under silk hats.

I am a believer in dairy form and temperament, but signs, fads and markings go for naught when balanced against dairy heredity, the dairy strength of generations behind a cow and that strength sought for more largely on the sire's side. It is here that line breeding, breeding to some

extent the daughters back to their own sires to make secure this heredity, rather than to decide it in halves and bring in as many more influences with the "fresh" outside blood, counts in dairy maintenance.

The lesson is this: Break away from old traditions and customs; select a dairy breed that suits you best and stay by that breed; do not change; grade up the best cows that you have; test and discard the poor and worthless cows; have a standard to line up to; do not be afraid of a certain amount of line breeding, to fix heredity; don't mix the breeds; depend upon the sire and his breeding to advance the merit of a herd; do not change sires very often; breed for good health; be thorough; feed for milk and not beef making; be sanitary; be a dairy student; don't get finicky, and the dairy of the future will be the wonder of the world.

If the horses eat their grain so fast that it does them no good try putting some smooth stones about the size of a hen's egg in the feed box.

It's easier to breed defects than good points. The latter are the result of thought and care, the former come from carelessness.

Teach the colt to stop promptly when told. This should be one of his first lessons. It may save many an accident.

The horses may not need as much grain when not hard at work, but they should have it just as regularly.

A good harness cupboard can be made cheaply, and it will keep the harness neat and free from dust.

We always like a horse that drives freely, but who likes one that will not stand without constantly fidgeting?

It's both slouchy and wasteful to feed grain in a feed box that is not clean.



The above cut shows a section of the present condition of Clark's Hay Field, eight years after seeding. This field produced this year over six tons of well dried timothy and redtop hay to each acre. You will see near the left hand corner one of the rocks which was left in the field before subjugation was commenced. From the original field more than one thousand tons of rocks were removed to each acre before the grass seed could be sown.

The cost of subduing this 16 acre plant was nearly five thousand dollars, all of which has long ago been paid for and a large profit is annually now

being received. This is the result from care and intense cultivation with his Double Action Cutaway Harrow. It has never cost from the start five dollars per ton for well dried hay, cut, cured and in the barn.

The real profits above all costs is more than \$60 a year, per acre.

If your patrons would do what I am doing they would get better results. If they want to know how to do it and will send me a two-cent stamp to Higganum, Conn., I will send them full information how to produce large crops of any kind.

Yours truly,
George M. Clark.

FOR SALE OR EXCHANGE.

Only Two Cents a Word,

all classified. Each initial or number counted as one word. No advertisement taken for less than 25 cents each issue. All replies must be sent direct to advertiser. Cash covering the exact number of words at 2 cents each must be sent with every order.

This Department for Live Stock Only.

CATTLE.

FOUR High-bred Registered Bull Calves, from 6 weeks old up to 1 yr., at farmers' prices. For full description and pedigree address S. F. WILLIAMS, Canton, Pa.

JERSEYS—Combination and Golden Lad. For sale—10 cows, 10 heifers and 20 bulls. S. E. NIVIN, Landenberg, Pa.

HOGS.

CHESTER WHITES—Gilts and pigs. W. P. Rocks, eggs \$1.00 per 15. J. S. T. FLEMING, Belleville, Pa., R. 2.

LARGE English Yorkshires—Sows bred and pigs from prize winners. CHAS. S. SNOOK, Utica Mills, Md.

REGISTERED Poland China Gilts and Service Boars. Choice Stock—farmers' prices. FRANK GUM, Frankford, Del.

DUROC JERSEY REDS for sale cheap—four sows, eight months old, bred to farrow in March; also September pigs. Address J. H. DIEHL, Pottsgrove, Pa.

MISCELLANEOUS

BROTHER accidentally have discovered root that will cure both tobacco habit and indigestion. Gladly send particulars. C. STOKES, Box 120, Mohawk, Florida.

POULTRY

PIT GAMES—pure bred Hopkinson Warhorse stags and eggs for sale. E. E. Cowden, Middlesboro, Ky.

White Wyandotte Eggs—Two dollars per fifteen. Day-old chicks after April first fifteen dollars per hundred; also Rhode Island Reds. Chestnut Ridge Poultry Farm, Baldwinville, N. Y.

FOR SALE—10 pure-bred Barred Rock hens and 1 fine Cockerel. H. Hand, Amagansett, N. Y.

"THE BREED THAT LAYS IS THE breed that pays." Pure Bred Single Comb White Leghorns. Best layers. Eggs for Hatching and Stock for sale. Write us before placing your order elsewhere. White Leghorn Poultry Yards Co., Route 17, Waterville, New York.

GRANT RIVERVIEW Poultry Farm, Lancaster, Wis. Eggs for hatching—White Holland Turkeys, Pekin Ducks and Barred P. R. Incubator eggs a specialty. Have for sale Duroc Jersey Swine. Correspondence solicited.

EGGS for hatching from prize-winning stock—Rose Comb Rhode Island Reds—\$1.50 per 15. Columbian Wyandottes \$2.00 per 15. OXFORD POULTRY YARDS, D. C. Hutchison, Oxford, Pa.

EGGS for hatching from Anderson's strain of prize winning Rose Comb Rhode Island Reds. For prices and particulars address ERNEST A. YARNALL, West Grove, Pa.

Drive the colt without blinds from the very start.



It has been years since such a sensational boom has struck the live stock markets as in March. Only a little over a month ago prices were dragging on such a low level that feeders were disheartened and were indiscriminately cutting loose from their stock in the feed lots. It was simply a case of getting away from a ruinous feed bill. Since then, however, there has been an advance of \$1.14 to \$1.40 for cattle, hogs have gained \$1.65 and sheep and lambs have gone up \$1.00 to \$1.40. Dropping off of supplies, good consumptive demand and a remarkably broad outlet through eastern shipping channels have been the boosting factors. What a difference now! Even the conservatives in the trade are looking for still further advances and the feeders who see good profits rolling in are just as bullish. Top cattle in March at \$7.50 was within 10c of the summit on the open market last year, while best hogs at \$6.45 was the highest since October, and lambs at \$8.35 the best figure since June.

Record-Breaking Runs.

A strained money market, along with high-priced feed and low market prices for stock on hoof, were the primary causes for the record-breaking combined run of 4,500,504 cattle, hogs and sheep here during the first three months of 1908, being 290,504 head more than the previous banner quarter-year movement in 1891. At the same time there has been a remarkable outward movement, the combined total of 1,444,546 head being the largest on record and indicating to what great extent the east is dependent upon the Chicago market for meat supplies. Without this broad outlet prices during the first two months of the year would likely have sunk to even lower levels than they did, and the sensational spurts they made in later weeks of March would not have been recorded in stock yard history.

Packers' determined bearish raids, combined with a marked curtailment in eastern shipping orders and increased receipts, caused a sharp reaction in prices from the higher levels to which they were soaring last week, though the boom in the hog market did not receive a set-back until Wednesday of that week. Of course, no one who had given trade conditions careful thought was surprised that the recent advance received a temporary check. Feeders should not take a pessimistic view of

the future, however, and commence liberal liquidation. This is what they must avoid by all means. If they will exercise caution there is no cause for alarm. At the same time, where cattle and hogs are fat such should be sent to market as soon as practicable, owing to the good prices prevailing, though those who have lambs in the feed lot should string their shipments out so that the receipts will be light daily and all will be well.

Cattle.

There was also a great advance of \$1.15 to \$1.40 in prices for cattle during March. It was \$7.50 for prime lots and bulk of selling was at \$5.90 to \$7.10 at the close of the month, which compared with a top of \$6.00 and \$4.80 to \$5.75 for bulk at the start of that month. Cows and heifers were relatively as high as steers, best heifers reaching \$6.70 and top cows at \$6.25, while bulk of medium to choice butcher cows and heifers late in the month landed at \$4.00 to \$5.25, while few bulls had to go under \$3.75, and best butcher grades at \$5.50. Calf prices were lower owing to excessive marketing of 42,040, the bulk of vealers in late days of March being secured at \$5.50 to \$6.25, and most heavy lots at \$3.50 to \$4.25. Stockers and feeders sold the highest in a long while, most of the latter offerings on late days of that month going at \$4.75 to \$5.25, and best at \$5.50, while stockers in main went out at a cost of \$3.85 to \$4.50, the best up to \$4.75. The above-mentioned high prices were put into effect in the face of total marketing of 252,543, the largest for that month since 1905, and compared with 230,341 for March of 1907. Shipments were very large, the total being 127,973, a big portion of which went on export and eastern shipping account.

Hogs.

Prices for hogs during March made some sensational advances, the gain being fully \$1.65. A top of \$4.70 at the start of the month compared with \$6.35 at the close, while the bulk of sales at \$4.50 to \$4.60 on March 1 stood against \$6.15 to \$6.25 at the finish. This advance was made in the face of total receipts showing 723,015, the largest since 1892, and compared with 578,632 for March, 1907. The extraordinary shipping demand was a big factor in boosting prices, the total outgoing movement being 281,759, the largest on record for that month, and 95,519 in excess of the

corresponding month of last year. Packers put up a hard fight to keep the market from getting away from them, but their efforts proved unavailing, owing to an insistent fresh meat demand and a broad outlet through eastern shipping channels.

Sheep.

There was a gain of \$1.00 to \$1.40 in prices for sheep and lambs during March. The eastern shipping demand was largely responsible for this big upshoot in prices, for if packers had had the market to themselves they would likely have kept the price range down to a relatively low level, as they were very dearish in their attitude all of the time and seemed intent on holding the market down. At the first of the month best mutton sheep made \$5.60, top yearlings \$6.15 and best lambs \$6.85, while at the close of the month \$8.15 was top for lambs, shorn offerings made \$7.50, yearlings \$7.40, and shorn \$7.00, with best mutton sheep at \$7.00 and shorn at \$6.65. Marketing of 263,499 sheep and lambs for the month was the smallest for March since 1902, and compared with 273,229 for the like month of last year. Shipments at 95,434 for March indicated 19,002 increase on the like month of 1907.

Seeding cottonwood trees are more hardy than those grown from cuttings, because the seedlings have a tap-root which strikes deeper in the ground.

TWO SUPERB NEW FRUITS

FREE WITH THE FRUIT GROWER

ST. JOSEPH, MO.

Send for a FREE Three Months Trial to America's leading fruit paper, The Fruit-Grower, and we will mail booklet telling how to get a tree of Delicious Apple and a vine of Banner Grape. FREE. Two of the best fruits ever introduced, hardly all over the country. Finest quality. Delicious Apple sold last season at \$6 a box. If you have only a few trees or plants you need this paper. Tells all about fruit—how to plant, cultivate, prune, spray, pack, market. Regular price \$1.00 a year, and two new fruits included free, but will make special offer if you answer this ad.

THE FRUIT-GROWER, Box 303, St. Joseph, Missouri

Send your paper three months FREE on trial, after which I will notify you to stop or become a subscriber.

Name _____

Town _____ State _____

HEAVES. THEIR

CAUSE AND CURE.

Everyone who owns a horse or who has charge of horses should know what to do and how best to help a horse when it is afflicted with the heaves. In the first place it should be understood that indigestion is primarily the cause of heaves. Over-feeding causes an abnormal condition of the stomach and violent exercise thereafter interferes with the expansion of the lungs, retards the circulation, and in a short time the peculiar cough which accompanies the disease is heard.

Now the best remedy known to veterinary science, one that is guaranteed to cure the heaves in any stage whatever, is Newton's Heave, Cough, Distemper and Indigestion Cure. This great remedy is highly praised by horsemen because it does its work of curing quickly and thoroughly, and leaves no ill effects of any kind.

The price of this remedy is \$1.00 a can, and it is for sale by all dealers, or will be sent by express, prepaid, on receipt of price by the manufacturers, The Newton Remedy Co., Toledo, Ohio.

This company publishes a book, entitled "Horse Troubles and Stable Hints," which will prove of great interest to any horse owner. It deals with the disease of horses, their prevention and cure, and also contains much valuable information regarding their care. This little book will be mailed free to those interested. Simply drop a postal to the Newton Remedy Co., Toledo, Ohio, asking for a copy, and one will be sent by return mail.

ENGLISH WALNUT TREES.

English walnut trees need very little pruning. Occasionally they may take on an awkward branch that must be shortened, but this is seldom the case. The English walnut tree should be raised to branch five or six feet above the ground, so that the branches will not be too much in the way. The best time to prune these trees is on mild days during the winter or early in the spring.

We Want

We want every Fruit Grower in the United States to see a copy of

The National Fruit Grower

Send us the names of people whom you know are growing fruit, along with your own.

An article on spraying in every issue, written by a thoroughly practical man.

DON'T DELAY

Write to-day for a free sample copy. Address

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THE DIXIE HOME

The largest, brightest and finest ILLUSTRATED MAGAZINE in the world for 10c a year, to introduce it ONLY. It is bright and up-to-date. Tells all about southern home life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once. 10c a year postpaid anywhere in the U. S., Canada and Mexico. Six years 50c. Or in clubs of six names 50c. 12 for \$1.00. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send to-day.

THE DIXIE HOME

NO. 1.

BIRMINGHAM, ALA.



You Can Have This Picture

This magnificent picture should be in every farm home. It is a delightful scene of a happy young farmer and his sweet-heart, a beautiful incident in the lives of a great many readers of this paper. The picture is printed in brilliant colors; size 16x22 inches. No farm house should be without it. We want you to become a reader of

THE FARMER'S RECORD

a large practical monthly farm journal. As a special inducement we will send it four months on trial for 10c. If you will also send us five names of farmers we will you the picture "Sweet Sixteen." Be sure to send the names with the 10 cents because we cannot give you the picture without them.

THE FARMER'S RECORD

721 Third Street Milwaukee, Wisconsin

A LIFE INCOME

If you only knew how to create for yourself a permanent income for life would you not set aside a few dollars each year for the next five or six years? Then maybe you would like to know how?

Take the culture of nut trees, for instance, and start with a very small investment—say only \$30 or \$40 per year. This amount will purchase and set out an acre of the paper-shell variety of pecan trees—twenty to the acre. The care and cultivation of these trees will cost very little, and the trees will not interfere with other farming operations on the same land. In from six to ten years from the setting out, each tree should yield at least twenty pounds of nuts—that is four hundred pounds to the acre—and at only 15 cents per pound (the best varieties are now selling at 50 and 75 cents), this means a net income for life of \$60 on each acre.

NOW YOU ARE INTERESTED

But, perhaps you will ask, can the pecan be grown successfully in my locality? Not necessarily. There are some sections of this country in which the pecan does not thrive; but there is hardly any portion of the United States where some of the many varieties of fruit or nut trees cannot be grown successfully.

If you care to know more about fruit and nut growing for profit, let us send you Free a three months' trial subscription to the

American Fruit and Nut Journal

which is authority on the culture of all varieties of fruits and nuts. Or, send us fifty cents for a year's subscription to the Journal and we will give you (absolutely free) a year's subscription to your choice of any fifty cent publication in America.

THINK IT OVER

But don't delay too long, for both of these offers are limited, and there may not be enough free subscriptions to go around among the late comers.

ROPER-HINTON COMPANY, Inc.

No. 125 Sycamore Street,
PETERSBURG, VIRGINIA.

Before He Bought a Tubular

**THIS MAN
USED TO CARRY
HALF TON OF
BUTTER
TO HIS HOGS
EVERY YEAR**



THAT'S what Mr. McKerrow did for twelve years previous to 1903. Then he bought a Tubular. When he discovered how wasteful he had been with cream, he says that he felt like "kicking himself." Listen to him:

Gentlemen:—Did you ever feel like kicking yourself? I have felt like that every time I think of what I have been throwing away for the last twelve years. Six tons of butter carried to the hogs in that time! I made 315 pounds per cow in 1904, deep setting; 368 pounds per cow in 1905, using Dairy Tubular; 53 pounds per cow for 20 cows makes 1060 pounds; this at 28 cents makes about \$290. I guess the Tubular has paid for itself all right. Skim-milk worth double too.

This is not an isolated case. Thousands of thankful families all over the globe are rejoicing in the possession of this profit-bringing, cream-saving machine. It seems like a friend ever after the first week. Even one day's lack of use makes the dairy-man or farmer miss it tremendously.

Ten Things a Tubular Surely Does.

- 1—Runs daily for months and months without a hitch. One man writes that in three years he paid out 40 cents for repairs.
- 2—It skims so clean we guarantee it to leave only one-half of that left by any other machine.
- 3—It turns easily, requiring one-half the power needed by other machines.
- 4—It will run one-half longer without clogging than any other machine.
- 5—It delivers one-half less froth in cream than any other separator.
- 6—Needs only a tablespoonful of oil twice a week.
- 7—It requires little attention from the operator because every part is thoroughly tested and inspected by experts at our factory before shipping.
- 8—It requires one-tenth the time in washing required by any other separator.
- 9—The receiving can is the lowest of them all and most convenient to clean and adjust.
- 10—A Tubular causes you no worry, fuss or muss. It's just a tried and true workman that is always on time; always sober.

A Tubular Will Pay for Itself.

We don't care where you live. If you own eight or ten cows you can use a Tubular and pay for it in cream saved in a year. Buy the easiest machine to fill, to turn, to wash. A separator that skims clean, needs next to no

THE SHARPLES SEPARATOR CO., WEST CHESTER, PA.
Toronto, Ontario, Chicago, Illinois, San Francisco, California.

Application for More Information About a Tubular.

THE SHARPLES SEPARATOR CO.
Gentlemen:—I would like to know more about your Tubular Separators. In order that you may treat me intelligently I will answer the questions below which I deem proper.

1. How many cows do you milk?.....
2. Have you a separator?..... What style?.....
3. Have you ever seen a Tubular skim?.....
4. Are there any of your neighbors who use a Tubular?.....

6. How far are you from a railroad station?.....
What is its name?.....
7. Send me your catalog No. 300 and other free literature explaining all about the Tubular. I understand that this coupon with my signature attached does not obligate me in any particular. I am filling out this coupon to obtain information about Tubular Separators.

Name.....
Address.....
Town..... State.....

repairs and saves you fuss, worry and trouble. It would pay to sell one of the cows and buy a Tubular.



Putting in Milk.

No high lifting; no slipping milk pail; and lost profits with a Tubular. The waist-low can solves the problem. Skimming is fun for the whole family from the six-year-old up. It is a pleasant anticipation because the exercise is not exhausting and the operation is without fatigue.

This is the way one man views the "high up" kind: "Gentlemen:—To say that we are pleased with our Tubular is putting it mildly. We have used a disc-filled, bucket bowl for several

allows it to stand idle in his dairy house. That means \$25 rusting! He uses a Tubular instead. Why? "Not for all the money in the universe" says he "will I break my wife's back, rattle her temper or spoil her digestion by requiring her to wash twice a day those 35 'pie plates' 305 days in the year."

Fill Out the Coupon.

We have asked you questions which we suspect you will be willing to answer. If you will fill out the coupon and forward to us we will see that you get just the treatment that will make you a leading friend of ours. We shall not force ourselves upon you to make you feel unpleasant and under obligations. All we ask is for you to give the Tubular a reasonable trial alongside of as many other separators as you wish, or alone. If it does not perform as we claim, you needn't keep it. We feel no fear in making this offer when nearly 75,000 separators leave our works every year. This number alone is a strong proof that our claims are not overstated. Where you see a Tubular, there you will find a satisfied, enthusiastic owner. Be sure to get our catalog mentioned in the coupon below and learn all about this money-making machine.



SHARPLES TUBULAR SEPARATOR

years. We find that we have been losing quite a percentage of cream besides "climbing up to the top of the house and pouring the milk down the chimney." For ease of operation, rapidity, and thoroughness of separation, there is no comparison between the two."

Turning a Tubular.

All working parts run in oil. Every part is adapted so perfectly to the other that once got in motion it's a joke to keep the bowl spinning. The oil compartment cannot possibly leak nor at any time allow the oil to spatter on or contaminate cream or milk. The machine takes care of itself and does not worry anyone with clogged oil holes or leaking bearings. Thus your cream and butter are free from the remotest possibility of ever being rejected because of machine-grease, odor or suggestion of rancidity. This one feature saves you much worry.

Washing a Tubular.

Only three pieces in the bowl to wash, all easily gotten at. Nothing to rake and scrape your knuckles nor skin your wrists and fingers. One man who owns a "bucket bowl" machine



50 CTS. A YEAR
3 YEARS for \$100

BLOODED STOCK

Blooded Stock comes out in a new form with the September number. See that your subscription has been renewed so that you get every issue. You cannot afford to miss it.

Vol. XIV MAY 1908 No. 3

DOES DAIRYING PAY?

I was talking with a man just a few days ago, who lives only a few miles from me. We were talking on the subject of dairying, and he asked me the question, "does dairying pay?" In making this man a reply, knowing that he was a man that had always followed the method of his father of raising corn, wheat and oats to sell, and also knowing that he had almost exhausted the supply of plant food in his soil, I thought it best to rather show him instead of telling him, yes. Of course, that would have answered his question much easier, but perhaps he would not have realized the fact as well.

I called his attention to his joining neighbor farmer who is making the business of dairying an occupation. I said to him, "Your neighbor just moved to that farm eight years ago, and to my knowledge it was just as badly run down as your farm is. This fact, of course, you personally know, and at that time he was a man of limited means."

You know, when he first moved on that farm, you and several others rather thought he would make a failure, but instead of making a failure he has made a grand success, and he has just followed dairying all that time; his fields are yielding good paying crops of whatever he puts on them, and it is joining yours, and only just a few years ago was just as poor as yours. Why has this difference taken place? Just because he has followed a paying business. Instead of raising crops that are exhaustive to the soil and selling them off the farm, he has raised those crops that would improve the fertility of his soil and at the same time make good dairy feed, and feeding the crops to his cows and returning all the manure back to the soil, and also instead of selling any feed he has bought a large amount of very rich feed for his cows and also returned the manure from that to his soil, and in this way he has constantly built up his soil instead of exhausting it."

He has sold an article that would not take much fertility from the soil. A ton of butter will not take much if any more fertility from the soil than 100 pounds of hay or straw.

R. B. Rushing.

Johnson Co., Ill.

SOME USEFUL POINTERS.

The Department of Agriculture says: Care in the selection of the ram at the head of the flock oftentimes doubles the profits made from the lambs.

Dorset ewes breed earlier and are more prolific than Shropshire ewes, and hence are more valuable in growing winter or hothouse lambs. The prolificacy of Dorset ewes is transmissible through the ram to other breeds of sheep.

Merino and other wool flocks of sheep can be converted into mutton flocks in three or four years by keeping a pure mutton ram at the head of the flock.

It pays in dollars and cents to feed lambs grain from birth whether they are to be sold at weaning time, later in the fall or fattened in winter and sold in the spring.

After weaning lambs it does not pay to feed more than one-half pound

of grain per head per day until the fattening period begins in the fall or winter.

Lambs with Down blood in them fatten much more rapidly than Merino lambs.

Sheep can be fattened on grain alone without any coarse fodder whatever.

Large lambs make gains faster than small ones. Lambs are much more profitably fed than yearlings. Ewe lambs fatten about as readily as wether lambs and bring just as good prices in the market.

When well cared for, ewes can raise twin lambs without losing any more flesh than when nursing a single lamb, and under such conditions twin lambs nursing one mother gain as rapidly as when there is but one lamb nursing.

Soiling can be practiced with sheep the same as with other stock, but it is generally much more profitable to let the sheep gather their own forage.

Lambs fall pastured on rape and given some grain from two and one-half to three pounds per week. They also fatten more rapidly during the feeding period following than grass-pastured lambs.

Sheep fatten most rapidly when allowed constant access to fresh water.

Lambs can be successfully fattened by means of a self-feeder, but it is an expensive process, and larger and cheaper gains can be obtained by feeding at regular intervals.

There is no profit in shearing sheep during the fattening period. Early shearing of lambs in October has given favorable results in some instances.

The cheapest grain ration for lambs, either before or after weaning, is corn, but it is not so safely fed or so greedily eaten as when oats or peas are added.

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Grooming the colt every day will add to his health.

If you must feed dusty hay sprinkle it with water first.

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The kind that grows and makes a big crop. Also pure bred Duroc-Jersey Swine. Book and Prices free.

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This is a very special offer and cannot be repeated after our present stock is reduced.

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For Practical Stock Breeders and Feeders
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preceding date of issue by

Times Publishing Co.

Dr. H. L. Patterson, President
C. E. Morrison, Secretary and Treasurer

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1. Fifty cents a year or three years for one dollar.

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Clubbing offers will be found on another page.

HORSE NOTES

A GOOD HORSE, like a good house, is built 'from the ground up,' the superstructure of the future horse being formed in the weaning colt; and while a 'lousy calf' sometimes comes out all right 'in the spring,' one that has escaped the 'vermin' is just so much the better off. As the character of the future man is generally formed in the boy, so also does complete development in the future mature horse depend on the thriftiness of the weaning colt. Therefore, that a good horse may result, the colt should not only be given a good start in life, but should be kept in healthful and thrifty condition throughout the growing stage."

WHAT IS REMARKABLE about the horse's stomach is its comparatively small size, for that of a large horse will not contain more than three to four gallons, whereas the first division of the ox's stomach, the rumen, will alone hold about sixty gallons. Another remarkable feature is, that the stomach is so curved on itself that its two extremities—the esophageal and intestinal portions—are quite near each other. This fact, the acute angle at which the esophagus joins the stomach, the folds of membrane inside this junction, and which form a kind of valve, the special arrangement of muscular fibers around the junction, together with the small size of the organ, are held to be the reason why the horse cannot vomit unless under very special conditions, one of which is rupture of the stomach. These particular features also explain why rupture of the organs occurs much more frequently in the horse than in other animals when it becomes overloaded with food, or when a large quantity of cooked food is given, as often happens in the country. Before this food can be digested fermentation sets in, and the resulting gases, unable to escape, inflate the stomach until its walls give way to the pressure exerted from within. When vomiting does occur in the horse, the discharged food is ejected through the nostrils.—Horse World.

KEEP your horse in good condition. If you expect to sell him, remember his condition and "fit" have much to do with the price. Have the horse so that you will never have to be making excuses for his appearance. Be careful that they are always nicely broken. With draft horses we are apt to neglect the training, and simply "hitch up" a few times and call them well broken. In trying to raise draft-horses, always be particular, with the dam and sire, to have animals that are sound, and I find that it is always best to use a thoroughbred sire. A cheap cross-bred or grade sire cannot be depended on for good results.—Alexander Galbraith.

IT IS generally admitted by those interested in the park or carriage horse that the demand for such horses is greater than the supply. As there has been a great falling off in breeding all kinds of horses the past five years, people are wondering from whence the future supply is coming. The style of carriage horses in America has undergone a great change the past twenty years. There was a time when any smooth horse sixteen to seventeen hands high would pass for a coach-horse, regardless of action. The inauguration of horse shows in the large cities has done much to educate the public to the proper form and action of the typical park horse. Many people think before we could establish a breed of the present style of horses now in demand the fashion would change; but we differ, as we believe the type that now pleases the public is the best style of horses ever used for heavy traps. Fashion has reduced the height of the carriage horse about four inches, but requires more substance and far more knee and hock action. A muscular, cob-built horse, fifteen or sixteen hands, with high knee and hock action—the higher the better, provided it is graceful—will now pass for a carriage-horse, and the more finish it has and the more breedy in appearance the greater its value.—F. Guide.

CARE OF MILK IN THE HOME.

(Government circular by Geo. M. Whitaker, U. S. Department of Agriculture.)

Cleanliness and cold are essential in having wholesome milk. Milk absorbs impurities whenever it is exposed to the air or placed in unclean vessels. The amount or degree of this contamination depends on the cleanliness of the air and the utensils; even the air of a so-called clean room contains some impurities. The bacteria which get into milk from the air or vessels increase rapidly as long as the milk remains warm—50 deg. F. or above; they are dormant or increase slowly at lower temperatures.

Cleanliness and cold are imperative if one would have good milk, although if it is consumed as soon after production that the bacteria in it do not have time to increase much—say two or three hours—the importance of cold is lessened.

If the producer and dealer have done their duty, there is daily left at the consumer's door a bottle of clean, cold, unadulterated milk. It may then become unfit for food, especially for babies, by improper treatment at home. This bad treatment consists (1) in placing it in unclean vessels, (2) in exposing it unnecessarily to the air, (3) in failure to keep it cool up to the time of using it.

The above expression, "a bottle of clean, cold, unadulterated milk" is used because the best way of delivering milk is in bottles. Dipping milk from large cans and pouring it into

customer's receptacles on the street—with all the incident exposure to air—not always the cleanest—is bad practice. Drawing milk from the faucet of a retailer's can is almost as bad as dipping milk; for though the milk may be exposed to the street air a little less than by the dipping process, it is not kept thoroughly mixed and some customers will receive less than their proportion of the cream.

If situated so that it is impossible to get bottled milk, do not set out over night an uncovered vessel to collect thousands of bacteria from street dust before milk is put into it. Have the milk delivered personally to some member of the family if possible; if not, set out a bowl covered with a plate, or, better still, use a glass preserving jar in which nothing but milk is put; use the jars with glass tops, but omit the rubber band.

Take the milk into the house soon after delivery, particularly in hot weather. Sometimes milk delivered as early as 4 a. m. remains out of doors until 9 or 10 o'clock. This is wrong. If it is inconvenient to receive the milk as soon as it is delivered, provide a sheltered place in which the milkman can leave it. Never allow the sun to shine for any length of time on the bottle of milk.

Put the milk in the refrigerator on receiving it and keep it there on ice when not using it. Milk can not be properly kept without ice.

Keep milk in the original bottle until needed for immediate consumption; do not pour it into a bowl or pitcher for storage; do not pour back

into the bottle milk which has been exposed to the air.

Keep the bottle covered with a paper cap or an inverted tumbler as

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long as milk is in it and when not actually pouring from it; after opening the bottle and removing a part of the milk do not leave the bottle uncovered.

Milk deteriorates by exposure to the air of pantry, kitchen or nursery. Do not expose uncovered milk in a refrigerator containing food of any kind, not to mention strong smelling foods like fish, cabbage or onions. An excellent way of serving milk on the table, from the sanitary standpoint, is in the original bottle; at all events pour out only what will be consumed at one meal.

When milk is received in a bowl instead of a bottle, observe the spirit of the above paragraphs. Keep the bowl covered as directed for the bottle. Expose uncovered milk to the air of any room as little as possible. Do not expose it all in a refrigerator.

Keep the refrigerator clean and sweet. Personally inspect it at least once a week. See that the outlet for melted ice is kept open and that the space under the ice rack is clean. The place where food is kept should be scalded every week with sal-soda solution; a single drop of spilled milk or a small particle of other neglected food will contaminate a refrigerator in a few days.

As soon as a milk bottle is empty, rinse it in lukewarm water until it appears clean and set it bottom side up to drain. Do not use it for any other purpose than holding milk. Never return filthy bottles.

All utensils with which milk comes in contact should be rinsed, washed and scalded every time they are used. Do not wash in dish water or wipe with ordinary dish towel; boil in clean water and set away unwiped.

When a baby is bottle fed, every time the feeding bottle and nipple are used they should be rinsed in lukewarm water, washed in hot water to which a small amount of washing soda has been added, and then scalded; never use a rubber tube between bottle and nipple.

If a case of typhoid fever, scarlet fever or diphtheria breaks out in the family, do not return any bottles to the milkman except with the knowledge of the attending physician and under conditions prescribed by him.

Milk from the grocery store or bakery which is kept in a can, open much of the time, possibly without refrigeration, is to be avoided.

Repeated experiments, together with the experience of careful farmers in the dairy districts of the world, have proven that calves can be raised on skim milk and fed and handled so that they will be thrifty, gain well and will be in good condition for the breeder or feeder.

If the calf begins scouring, at once cut down the feed of milk. The presence of scours is the best indication of indigestion, and indigestion in the case of the calf comes most frequently from over feeding.

Shoo-Fly THE ANIMALS' FRIEND

Kills every fly it strikes. Keeps all insect pests of cow and pasture from annoying animals. Absolutely harmless. Cures all sorts of fly ailments. Since 1886. Kills flies and mosquitoes. 15c a tin. Write for free literature, send us \$1 for Improved 3-tube Sprayer and enough SHOO-FLY to protect 200 cows. Name express of free. \$1 returned if cows not protected. Free booklet Shoo-Fly Mfg. Co., 1311 N. 10th St., Phila., Pa. Editor knows from experience that Shoo-Fly is it. K.

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CREAM SEPARATORS
ALWAYS IN THE LEAD

From the invention by DE LAVAL of the first practical cream separator in 1878 the DE LAVAL machines have been always in the lead:

The first "hollow" bowl cream separator; the first factory cream separator; all of the several first styles of hand separators; the first steam turbine separator; the first "disc" bowl separator, and the first "split-wing" or distributing tubular shaft separator—were each and all DE LAVAL inventions, each marking periods of advancing evolution in the usefulness of the cream separator.

So too were the first "tubular" shaped bowl separator; the first bottom feed separator; the first vertical "blade" bowl separator; the first interior cone construction bowl separator, and numberless other types of construction, each and all DE LAVAL inventions, though found so impractical or comparatively inferior, from one reason or another, that they were never put into commercial use in the DE LAVAL machines.

Every would-be competing cream separator on the market today merely utilizes some patent expired or abandoned DE LAVAL construction, and if any one of them should make pretense of denying it the patent evidence may be easily produced showing the falsity or evasion of such denial.

The new 1908 DE LAVAL cream separators mark another great evolution in cream separator construction, being new and remodelled in practically every detail, and place a still wider margin of superiority between the DE LAVAL and even the best of imitating separators.

The DE LAVAL main factories in the United States and Sweden are the largest and finest of their kind and have ranked for ten years among the model shops of the world; their equipment is the best that mechanical science and money can make it; the twenty smaller DE LAVAL factories, assembling, and repair shops, in as many different countries, are relatively as superior; the DE LAVAL inventors and experimental engineers are the best of the men who have shown practical separator genius in every country, and a large staff of them is kept constantly at the betterment of the DE LAVAL machines, while the shop employees generally are the most competent and best paid in their various classes.

THE GREAT OBJECT EVER KEPT BEFORE EVERY MEMBER OF THE DE LAVAL PRODUCTIVE ORGANIZATION IS THE MAKING OF THE BEST CREAM SEPARATOR POSSIBLE AND EVER THE MAKING OF IT BETTER THIS YEAR THAN LAST YEAR.

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THE DE LAVAL SEPARATOR CO.

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107 FIRST STREET PORTLAND, OREG.

AN EXTRAORDINARY SITUATION.

That a most extraordinary condition exists in most country districts regarding the demand and supply of useful horse stock no one who is at all familiar with the situation can question for a moment.

The useful horse, namely, the farm horse, the road horse, fancy and fair, and the general utility horse, even in the leading horse-breeding States of Illinois, Indiana, and Ohio, is at this time a most urgently needed necessity, with the supply so inadequate as to make values most unusual, to say the least.

The country situation is most correctly gauged by the values set by farmers and other country buyers at the ever numerous local spring auction sales throughout most country districts each year during the months of February and March.

Never before have such high values prevailed at these farm sales during the present farm sale season, and this right on the heels of a so-called "money panic." At these sales it is common for "just farm horses" to bring \$200, and it is not at all unusual for a "real good one" to bring \$250, or a pair—even of mules—to bring \$450 to \$500.

And farm horses to bring these prices are by no sort of means necessarily of the extra quality of heavy draft sort. Indeed, on the contrary, trotting-bred horses of various grades—the better the breeding the better the price—of the larger size and better patterns usually top the market at these country sales, for even average farmers have struck the "twentieth century gait" of doing things, and, knowing that a trotting-bred farm team weighing 2,200 to 2,400 pounds is abundantly strong enough to handle all ordinary farm loads, and can at the same time, owing to their naturally more active movements, "work rings around" a four-ton draft team—and eat much less—they prefer them to the heavier breeds for average farm work.

Conditions existing in the country at the present time are, therefore, not only expressive of an extraordinary condition as regards horse values, but are valuable and useful object-lessons to all interested classes who will take the trouble to observe what is daily going on around and about them.

In the first place, these existing conditions should not fail to impress farmers, especially those of the more progressive sort, that horse breeding is now, and within the nature of things long will be, one of the most profitable branches of their entire industry. In the second place, the object-lesson teachings are just as plain that the truly American horse, namely, the trotting-bred horse, when due consideration is given to size, quality, finish and soundness, is clearly the most useful as well as the most profitable horse to breed and raise.

This assertion is not to be taken as a "knock" against the draft horse, but merely a citation of things and conditions as they actually exist. The real draft horse cannot be dispensed with, and, when of the right sort, the city demand for him will always make him a profitable product of his breeder.

But there is always a "best" general class, for the largest range of

uses and greatest profits, in all species of live stock, and among equines the American horse, namely, the trotting-bred horse, is the best all-around horse which has yet been produced. A trotting-bred horse does not have to trot in 2.00, nor in 2.10, nor even in 2.20, to prove a profitable product for his breeder. Indeed, he does not have to trot in four minutes.

However, four-minute speed is a good road—not speedway—clip, and there are few trotting breeds which cannot, naturally, road a four-minute gait. Speed is an enhancer of value, to be sure, but the trotting-bred horse can, and often does, possess great value without possessing great speed—even mediocre speed.

A stoutly-made twelve-hundred-pound horse is the ideal farm horse. Twelve-hundred-pound, stoutly-made trotting-bred horses are numerous, and are becoming more numerous every year. A twelve-hundred-pound, rangy-made, bold-going horse is the ideal carriage horse. This class comes almost exclusively from the trotting horse family, and their relative number is constantly on the increase, as breeding animals for the production of this class become more and more considerably selected and mated.

The fancy and speedy roadster may be of almost any size as regards height and weight, as may also the light harness race horse. These two classes come only from the trotting horse family, and certainly their production is a profitable business. Another profitable—and yet in inadequate supply—is the saddle horse. Trotting-bred horses "educate" readily as saddlers, and high-class saddlers a majority of them would make. A good per cent of trotting-bred horses have the "saddler" form, style and conformation, and they learn fast when put under the saddle.

In the show ring, in both the light

BLOODED STOCK for May—1908

and medium harness classes, and also including the heavy coach classes, the American trotter is well-nigh invincible. In all of these various classes, including extreme speed race horses, prevailing values indicate an inefficient supply. Then why not breed and raise more horses? And as the trotting-bred horse fits more uses than any other breed—indeed, more than all other breeds—why not breed and raise trotting-bred horses?—Western Horseman.

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Clark's Reversible Bush and Bog Plow. Cuts a track 5 ft. wide, 1 ft. deep. Will plow a new cut forest. His double action Cutaway Harrow keeps land true. Moves 18 000 tons of earth. Cuts 30 acres per day.

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can be used to cultivate rowed crops, as a list-harrow, also when closed together is a harrow cutting 4 1/2 feet wide.

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BLOODED STOCK for May—1908

THE SILO AND ITS IMPORTANCE.

I am glad to speak upon silos and silage at this Iowa Dairy Convention because I am sure it means more to the dairy farmer of the great corn belt of which Iowa is the heart, than most of us have any conception, and in the future the silo will mean more than it has in the past. Commercial food stuffs have been and are advancing rapidly in price. Many by-products valuable as food stuffs for dairy cattle that a few years ago were cheap, are to-day almost, if not quite, too expensive for the dairy feeder to consider when compiling his rations. The time is present when the farmer must rely more upon his own efforts to produce and preserve upon his own farm those foods that will supply the needs of his dairy herds. He must, in fact, practice intensive farming in the broadest sense. That which in the past was waste will in the future measure to a great extent the profits. And I dare say there is no one thing that could be added to the farm equipment that would promote intensive farming so greatly as a good, well built silo. The silo will make it possible to produce two pounds of milk where one was formerly produced, and in so doing fertilizing constituents will be made available that when returned to the land will increase the yield of grass in the same proportions. These results will be brought about, too, at a less expense than through any other methods of supplying feed to the herds were resorted to.

Like any other farm improvement, however, the building of a silo incurs considerable expense, yet it is quite doubtful whether or not any other building can be built that will have such a large capacity for the storage of roughage as the silo. Compare the space required for a ton of hay with that necessary for a ton of corn silage. It requires, as you are all aware, at least 400 cu. ft. of mow room for one ton of hay. For one ton of corn silage 50 cu. ft. are required. Therefore eight tons of silage require the same storage space as one ton of clover hay, but one ton of clover hay contains 1,680 pounds of dry matter, and 8 tons of corn silage contains 3,360 pounds of dry matter—just twice as much. Therefore, 200 cu. ft. of space in the silo will preserve as much dry matter as 400 cu. ft. in the hay mow.

Figuring more closely, and comparing the digestible feeding nutrients which indicate more nearly than anything else the value of food stuff, we find that one ton of clover hay contains 886 pounds of total digestible nutrients, 8 tons of corn silage contains 2,064 pounds. Thus it is that 2 1/3 times as many digestible feeding nutrients can be stored in the same silo space as in the hay mow. Summing up, then, we find that to furnish storage space for feed in substitute of a silo having a capacity of 100 tons of silage, a hay barn having a capacity of 800 tons would be required, or a hay barn having a capacity of 233 tons to store the same amount of digestible feeding nutrients, or a barn with a capacity of 200 tons to store the same amount of dry matter as a silo holding 100 tons of ensilage. Determine the cost of a hay barn with a capacity of from 200 to 233 tons of clover hay, add to this the extra ad-

vantage of supplying succulence to the cow's winter ration and the real value of a 100 ton silo readily becomes apparent.

In selecting the site for erecting the silo the following considerations should be kept in mind. First, the silo should not be placed in the barn where the cows are milked nor close to the milking room. If it is the silage odors will be present to contaminate the milk at milking periods. Second, it should be so placed as to be convenient to feed from. To accomplish both these results no better plan can be practiced than to erect the silo four or five feet from one end of the feeding alley and connect it with the barn by a corridor, the door of which closes tightly and prohibits all silage odors from entering the cow barn except at feeding times. These should always occur after milking. A third and less important consideration should be that of adding rather than detracting from the appearance of the farm buildings.—H. G. Van Pelt.

VALUE OF HUMUS.

1. Humus is decaying vegetable matter in the soil.
2. It is the storehouse of nitrogen, the most expensive and the most necessary of all plant foods.
3. It contains the food upon which the soil organisms live, whose function is to convert organic nitrogen into nitrates in order to be available for the use of plants. It materially assists in decomposing the mineral constituents of the soil, such as potash and phosphoric acid, making them available for the use of plants.
4. It increases the power of the soil to hold water without becoming waterlogged.
5. It makes clay soil more open and friable. It serves to compact sandy soil and increase its drouth-resisting power.
6. It prevents washing to a great extent; thereby diminishing the loss of fertility by that cause.
7. Soil filled with humus more

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JUDGING DAIRY CATTLE.

Report of Chas. H. Everett, editor Wisconsin Agriculturist, of an address by W. D. Hoard at the Monroe Convention of the Wisconsin Dairymen's Association:

At the afternoon session ex-Governor Hoard gave a very instructing talk on "Judging the Dairy Cow." Mr. Hoard used life-size drawings of dairy cows with which to illustrate his remarks, and therefore made his arguments strong and easy to understand. He dwelt at length upon temperament, function and form, and said that temperament determined function, and function form. To illustrate what he meant by function and form, he alluded to a sewing machine and a mower, and said that the function of the sewing machine was to sew cloth; that it could not be used to cut grass, and that it had a form peculiar to itself, adapted to the use for which it was intended, and unlike the form of the mowing machine. The mowing machine cannot be used to sew cloth, and is not the least bit like the sewing machine in form. Each machine is made for special work and has a form distinct from that of any other kind of machinery.

He then called the dairymen's attention to the greyhound and the bull dog. "Are they the least bit alike in form?" asked the Governor. "Is it not plain to you that each one has a form fitted for the work it has to do?" He next cited the trotting horse and the draft horse. "The trotter can cover a mile in 2.10, but the drafter cannot trot a mile in ten minutes. The explanation is simple. The trotting horse has a form which enables him to go fast, while the draft horse is built to haul heavy loads. They are not built alike in any particular. The slope of the shoulder is different and neither one can do the work of the other."

The speaker made his points very clear, and carefully led his hearers down to dairy temperament, function and form. He described dairy form in detail and gave clear and convincing reasons for the peculiar construction of a dairy cow. "There are two functions in cows," he said, "one is to convert feed into milk, and the other is to make flesh of it. The dairy cow cannot make beef at a profit because she lacks the form upon which to place it, and the beef cow cannot produce milk at a great profit, because she is not built right, has not the large heart, lungs, udder, milk veins, etc., necessary for the production of a large quantity of milk."

In describing dairy form the Governor began at the head and dwelt at length upon the value of a large brain as indicated by width between the eyes and the poll. The size of the brain indicates nerve force, and a good dairy cow must possess lots of it. The brain is connected with the spinal marrow through which the nerves extend to the different centers. Deficiency in head construction and brain capacity is indicative of an indifferent performer.

He called attention to the nostrils, and said that they must be large, because the dairy cow required more pure air than the beef cow. This he thought was one of the strongest points Mr. Hoard made, because, as he said, pure air is of the highest importance, and just why, is not very well understood by the average dairyman.

Milk is elaborated from the blood. Food is converted into blood, which is forced from the heart and lungs to the udder, from the udder it returns to the heart through the large veins on the under side of the belly, running from the udder nearly to the front legs, where they enter the body and connect with the heart. These veins are commonly called milk veins, but they are not, however, as no milk ever passes through them. The orifices in the body, where such veins enter, are called milk wells.

In explaining the necessity for much pure air, the Governor said: "When the blood leaves the lungs, it is bright red because it has just been vitalized by the air inhaled by the cow. When the blood leaves the udder, it is very dark and impure. It is still so when it leaves the heart, but the moment it reaches the lungs, it comes in contact with lots of pure air (provided the cow has large nostrils and is provided with pure air), which vitalizes it, removes the impurities that have gathered during its travels through the system—makes it pure, healthy blood. Here the dark color is changed to bright red and so the blood goes forth again purified and strong."

Every dairyman should think of these things, for great success cannot be obtained without giving heed to such matters. Ventilation must be supplied; good, pure air in abundance must be available if good milk is wanted, and if tuberculosis would be avoided. One can easily understand from the above that unless good air is provided, the cow has no chance to get rid of germs and disease which circulate through the system in the blood, until they find lodgment, where the work of destruction is begun.

The speaker spoke upon the spare form of the dairy cow and gave reasons for such a conformation. "The incurved ham, commonly called cat-hammed, was to afford room for a large udder. A good cow must have great udder capacity, and nature has provided room for it. Not so in the beef cow. Her ham is curved the other way like that of a Poland China hog. She is all beef behind and has a small udder tucked up under the belly. The udder should extend well up between the legs and well forward towards the front legs. The line of connection to the body should be as long as the distance from the udder to the front legs."

He next touched upon the spring of the rib and the prominent backbone, and clearly defined constitution and how to determine whether a cow had a strong constitution or not. "The ribs are sloping," he said, "not well sprung" as they are in the beef cow, for the purpose of laying on a thick layer of juicy meat along the loin, where it is worth a high price when the animal goes to the block. The dairy cow has no use for this meat, she cannot manufacture it. It is not her function. She has been otherwise educated by years of breeding.

"Beef costs money, and if the dairy cow puts some of her feed on her back instead of into the pail, she would be an expensive producer, because no one can get anything for the beef of a cow around on her back. Her function is to make milk of the feed, and so she has no useless appendages or blocky form to support

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at the cost of expensive feed. She has been made thin and spare, with a sloping rib, made sloping, no doubt, by the constant dragging down of the heavy load of feed and water she carries in her stomach and digestive tract, in order that she may give lots of milk.

"The heart and lungs of a dairy cow are larger and weigh more," said Mr. Hoard, "than do those of the beef cow. The opposite is generally supposed to be the case, but examination at the block quickly shows the difference. The strong blood circulation that must go on constantly in the manufacture of milk and the large amounts of air needed at all times, have gradually enlarged these vital organs. They have adjusted themselves to the function of the cow and are the most important part of her machinery, for with a weak blood circulation and small lung capacity she is a failure."

The discussion that followed the

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It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

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ex-Governor's remarks was very interesting and instructive, and many important points were brought out and made clear. For instance, he was asked about cross breeding—that is, crossing the Holstein on the Jersey, for instance, to get more milk, then using the Guernsey to get more color, the Shorthorn to get some beef, etc. He said such breeding was silly and foolish, for nothing good could ever result from it. The prepotency of the different breeds was so strong that when brought together they began to war with each other at once, and failure would result, unless such breeding was continued in a straight line long enough for the prepotency of one breed to overcome that of the other. To illustrate, the Governor said:

If a pure bred Holstein bull is crossed on the Jersey and this is followed up by the constant use of pure bred Holstein bulls on the heifers that are the results of such breeding, the Jersey characteristics must gradually give way to Holstein dominance, but nothing is to be gained by such foolish work, for at the end of years of such breeding, one would probably not have as good cows as those he began with. These pure bred breeds of cattle have been made so by hundreds of years of selection, environment, etc. They cannot be crossed without war at once, and it does not cease until one or the other has been overcome by the addition of more blood. Meantime production is greatly interfered with and profit vanishes.

"Nature doesn't engage in cross breeding," said this profound thinker. "Did you ever know of an instance where the robin had nicked with the bluejay? No. Does the mallard duck cross with the canvasback or teal? No. Does the deer cross with other animals? No. Does wheat cross with barley? No. Does the oak cross breed with the hickory? No. Do doves nick with the crows? No." He told a story which well illustrates what cross breeding and the mixing of breed results in. He said that a Frenchman went into a saloon to get a drink called "flip," but as the Frenchman could not remember the name of it, he described it to the bartender as follows: "You put in some brandy to make it strong, some lemon to make it weak, some lemon to make it sour, and some sugar to make it

sweet." "A grand combination," the Frenchman said. Such a drink might taste good, we can imagine, but the brandy has been spoiled, its purity ruined. The water also was defiled, and so with each ingredient; its purity was lost, and "flip" was a good name for it.

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P. F. HAMILTON, Cockranville, Pa.

FARM MANAGEMENT.

It would indeed be very interesting if we could take a census of the farmers and determine how many of them study the market; we would not be far from wrong to make an estimate that not one per cent. of the farmers pay any attention to the market whatever; whenever anything is in condition for the market it is sold.

In order to be successful we must study the markets, not alone the markets, but also the various cities that offer a market and the railroad facilities to that market. We spend too much time abusing the railroads and too little time in studying their business system. The large roads know just what the farmers are doing, they know well the cost of producing a crop, they are perfectly acquainted with the detail work of the farm, how many farmers have given any attention to railroad systems.

Delays in traffic are very expensive, aim to catch a good market when freight on the road is slack, distance from the market is another factor to be considered, it often pays to pay little more freight on the produce if the shipper can save from 12 to 24 hours in reaching the destination.

Although shipping the product is a great item, it is not quite as important as what you ship. A man that handles stock, to him nothing would pay so well as spending several days at the stock yards and keeping his eyes open. Here one can see car-load after load of sheep, cattle and hogs come in, and what a lot they are! Among the cattle everything can be picked out of one car lot that ranges from a canner to extra good, most of the hogs that come in are no better, these run from 350 pound hogs to 50-pound shoats. Under these conditions how can a farmer expect to get the best prices? The buyer pays for the poorest, the loss is to the farmer who should justly bear it under such conditions.

In order to get the best that the market offers we should study the market reports, or even write to the commission men or packers who are at all times willing to give information in regard to what they want; when you have found this out, furnish that which they demand, if you have not a full load several men can go together and ship the different grades in car-load lots. No one can force something upon the market that it does not want.

The grain farmers are no better than the stock men in this respect. We have gone to flouring mills in small towns, and local elevator, the grain brought in by some of the farmers would grade as "rejected" in States where there is a grain inspection. When one considers the small efforts on the farmers' part to grow and market a good clean and pure grain it is not just that he receives much less than market price when he delivers foul grain.

Not long ago our attention was called to some cases where the oats had been "stovepiped," as it was termed. The men that shipped the oats placed a stove pipe in the center of the sack. Oats was put all around this, on the inside of the pipe they put sand and rubbish, then pulled out the pipe and put some good grain on top. What was the result? A large town that was the best custo-

mer for the oats that this one locality has been growing refuses to purchase any more; the abuses heaped upon this mining town by this farming community is beyond description. Potato and fruit growers are not exempt from the list of men that send out poor or mixed lot of goods, under all conditions does it pay, and that well, for the shipper to grade his ware. Grain may be fanned and the light stuff fed to the stock, poor fruit and potatoes may likewise be sorted.

The market is always willing to pay more for a first-class article than for medium grade goods, and when we once try this method of giving the market what it demands we will find that the larger profits will be on our side of the ledger.

TO AVOID CRACKED HEELS.

It seems to be a deplorable fact that a great percentage of high-bred horses have extremely thin and tender skins, and at no point does the skin seem so tender as at the heels on the inside, from the coronet band to the ankle. This particular point also seems to be the place where all sorts of dirt and scurf find lodgment, and it further appears to have a secretion peculiarly its own, especially when in a fevered condition.

One will find heels with a tendency to crack that are helped by ointment containing grease, vaseline, etc., while others are poisoned by the slightest particle of greasy matter of any kind.

The first requisite, then, in both varieties of sore heels is to keep them clean. For this purpose nothing has been found that touches pure Castile soap and warm water, not to be applied in the usual perfunctory way but by use of a fairly stiff brush, such as is commonly used at home for the purpose of hand washing. As the horse comes in from his jog or workout, no matter whether the roads are muddy or not, have warm water ready; after the hoofs are cleansed and washed, take a perfectly clean pail and bar of white Castile soap, have the hostler scrub each heel and thoroughly rinse it clean; carefully wipe each heel dry, and if the horse shows no sign of fever in either ankle or heel apply ointment. Nothing is better for this purpose than carboline, though mutton tallow is also fine. If, however, there is the slightest sign of eczema, and this is readily determined by the puffy condition of the ankle above the heel and also by the oozing out of a pale yellow liquid and a falling of the hair, use no grease; it is poison for beast as for man under such conditions. In this case, a weak solution of boracic acid is good, and a preparation called mum, for deodorizing perspiration on the human body, is also fine, probably because it contains the above acid.

The key to the situation, however, is the castile soap and careful washing; be sure it's done, don't trust your man, but watch him and be sure he uses the brush. Cases will be found where this swelling of the ankle down to the hoof occurs after a hard drive or workout; in these cases, after the washing of the parts and treatment as directed, dry and apply a cold-water bandage, to be changed frequently; also the swabs kept wet.

These directions, followed closely, will cause those horsemen who do

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not already know it to bless the writer. Do not forget, however, that the keynote to the situation is the pure, mild Castile soap and warm water. It is well when working out, also to keep the sweat away from the heels by tying rubbing towels loosely around the ankle.—E. C. Hathaway, in the Horse World.

PASTURE FOR HOGS.

Minnesota Station on its Comparative Value.

Experiments show that as much pork can be made from one acre of good pasture as from one ton of shorts or corn. The cost of these feeds varies from \$15 to \$20 a ton. An acre of pasture will save then from \$15 to \$20 worth of feed. It is quite evident that in the economical production of animal products good pastures are an important factor.

The reason more and better hog pastures are not used is chiefly due to the fact that hog fences are quite expensive. The advent of the woven wire fence is overcoming this feature and now land may be fenced hog tight at an annual cost of from \$1 to \$2.50 per acre, depending on the size and shape of fields fenced and cost of posts.

A permanent pasture for hogs, though being the cheaper to fence, is not entirely satisfactory for the more desirable crops, as clovers (except white clover) cannot be kept in a permanent pasture. The rooting of the hogs greatly reduces the returns and the pasture constantly gets poorer. Sowing annual crops for pastures, as peas and oats, rape, grain of any kind, or corn, is not wholly a success owing

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to the great amount of labor required to plow, prepare and sow such pastures two or more times each year.

The more satisfactory pasture for hogs is clover used but one year. The clover seed is sown with the grain crop the year before it is pastured, so there is no cost for plowing or preparing the land. Clover is readily eaten by pigs of all sizes and ages and the first year it is seeded it gives as much pasture per acre as any crop. The total cost of such a pasture would be \$6.50 per acre, with rent of land at \$3.50; cost of seed \$1.20 and fencing \$1.80. If an acre of such pasture is equivalent to a half ton of shorts it is returning a good profit. Many seasons it will return an equivalent of one ton of shorts in which case there could be no question as to its value and profitability.

Permanent pastures for hogs are not as desirable as good clover pastures. In fact, they cannot be compared with them. Clover pastures are not permanent, as most of the clover is killed out the first winter after it is pastured. Quite often wood lots or other pieces of land that cannot be cultivated are fenced for hogs, and when large enough may make fairly good pastures, though as a rule much smaller returns per acre are obtained than from good rotation pastures. When such pastures are provided on a farm it is probably not wise to change at once, and in such cases the scheme of rotation suggested above does not apply. On such farms it is desirable to hog off corn, which in many cases it is intensely practical to do, temporary fences may be used to advantage to fence off any field of corn whatever amount can be handled in this way.

One acre of average clover pasture will furnish ample feed for two sows and their litters (the average litter being seven pigs). Some seasons the clover will get ahead of the pigs, but clover pasture is so cheap a feed that no hog raiser can afford to run the risk of short pastures. Surplus clover in a hog pasture may be utilized for hay or other stock. A shortness of pasture necessitates supplying the deficiency by other feeds costing two to four times as much. On farms where six brood sows are kept about three acres of clover pasture should be provided. Six sows on the average would yield from forty to fifty pigs. The pigs would be able, during the fall, to feed off about six acres of average corn. A four-year rotation on four three-acre fields would meet the needs on a farm keeping six brood sows.

In laying out a rotation for hogs the number that it is desired to keep should be decided upon, then the size of the fields can be determined. The larger the fields used, other things being equal, the cheaper the cost of fencing per acre and the more economically the fields are worked. However, it is not advisable to fence hog-tight very much more land than can be conveniently utilized by hogs, as cheaper fences that are just as effective, may be used for cattle.

Some of the important points to consider in laying out a practical rotation for hogs are: First, number of animals to be kept; second, convenience in feeding while in field; third, shape of fields, so that they may be easily worked, and, fourth, the least possible number of rods of fencing to

the acre, inclosed. With these points before one and each considered a rotation may be laid out intelligently and to fit most any farm.

PRESERVING EGGS.

The Limewater and the Water Glass Methods—Packing.

In its Timely Hints for Farmers series of bulletins, the Arizona Experiment station issues the following on Preserving Eggs, by E. A. Vinson:

Preserved eggs may be substituted for fresh ones in many cases with profit. They may be scrambled and used in omelets; also for baking various cakes which do not require beaten whites. As a rule they are the equivalent of fresh eggs in any food where the yolk is broken; but only when specially preserved and when kept not too long are they suitable to serve fried.

The preserving material seals up the pores in the shell and thus prevents the entrance of bacteria and air as well as evaporation and consequent shrinkage of the egg contents. The old method of greasing the shell to make the eggs keep better depended on this fact. Such eggs cannot be boiled because the impervious shells do not permit the escape of the enclosed air, which expands when heated and bursts open the egg. By serving the commoner purposes the preserved egg economizes the fresh egg for which there is an ever-increasing demand for use as raw food in the treatment of certain diseases.

When the eggs are to be kept for a short time only, one of the usual methods of packing is sufficient. For this purpose they are imbedded in some lime material such as dry bran, oats, sawdust, or salt. Care must be taken that the packing material is perfectly dry and free from must. There is always danger of losing the eggs by the growth of mould on the inside of the shell, as the writer has frequently observed. A better way is said to be the use of egg shelves. These are arranged in a cool dry place and are provided with holes so that the eggs may be stood on end. Handled in this way, eggs are said to keep better than when packed. Preserving in some chemical solution is, however, a much safer method for general use.

Before recommending any formulas to the public the writer has given several of them a critical study to determine exactly what can be expected under our conditions. The various lots of eggs were preserved in June when they could be purchased at about 30 cents a dozen, and were used in November when fresh eggs were selling at 70 cents. Thus they were carried through the excessive heat of June and July and found to be usable in the fall.

There are two solutions commonly used for preserving eggs, each of which has its advantages and disadvantages.

Limewater method—The commonest and oldest preservative is limewater. A few lumps of quicklime are slaked in a large vessel of water, and after the excess of lime has settled out the clear liquid is poured over perfectly fresh eggs in a clean jar. A very small amount of the slaked lime may then be added to replace the lime which will be separated out by the action of the air. After a few days a

thick crust will form on the surface, which should not be disturbed, for it prevents evaporation and excludes the air. Some add salt to the limewater and claim it improves the quality of the eggs. Limewater preserved eggs will keep well and are serviceable for all purposes excepting to fry, the yolks not holding up well and the eggs being apt to become mushy. There is a great tendency for the white to become watery, but this does not render the egg unwholesome. They are just as serviceable for baking and for other purposes as fresh eggs, excepting that the whites cannot be beaten. The great advantage of this method is the ease with which lime may be obtained. (Continued to page 14)



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Salvia, 2	Larkspur, 10	Sweet Alyssum, 10
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Chicago, Union Stock Yards, May 4.—The set-back in the cattle market last week in April should not cause apprehension among the feeders. Its chief cause was the overgrown run of 30,314 head on Monday of the week ending May 2, which stood within 10,131 head of the total marketing here for the week before, when supplies were the smallest for any week since the last week in July, 1904, barring the Fourth of July week of 1906. The big run was due partly to feeders' anxiety to get part of the previous week's advance and also to the closing of contracts on May 1. It is the belief of Clay, Robinson & Co. that it will be many months before another crop of corn-fed cattle as large as on Monday will show up here in one day. They anticipate smaller receipts of cattle until the grassers commence coming to market in earnest, at which time the runs of corn-fed offerings will be comparatively slim. At the same time, they do not look for any rapid gains in prices, as industrial conditions do not warrant this, though all marked changes in the market from now on should be for the better. The trade may get an occasional set-back, but this will be of short duration, as the visible supply of corn-fed cattle to come marketward during the next few months is too small to permit of continued pounding tactics by buyers. There are some feeders who have finished, big weight heaves which they intend to hold back for a few weeks. This is a wrong policy to pursue at this time, as they should be marketed as soon as practicable, owing to the fact that buyers will discriminate against such weights more and more as the warm weather approaches.

Future Hog Market Uncertain.

The packers have quite handily dominated the hog market lately even under greatly reduced receipts here as well as at outside points. This has caused those who have grown gray in the business of selling swine to express themselves as uncertain as to the near future of the market.

The fact that the buyers have been enabled to lay in their supplies at lower values in the face of conditions that should, under normal circumstances, spell higher prices, is not conducive to any permanent rise in the price range very soon. Bearishness of packers has prevailed against a comparatively good outlet through Eastern shipping channels and greatly reduced marketing, it seeming to be their sole aim to keep prices down around the \$5.50 basis or lower. When

they are able to get into the trade on this basis they seem willing to take hold, but let values go above the \$5.50 mark, and they become very indifferent. Their chief bearish argument is a slack consumptive demand for fresh pork products, which is remarkable in the face of high lamb meats and an advancing fat cattle market. They also assert that storing away the products in their cellars is very unprofitable, when hogs are costing upward of \$5.50, and this explains why they are playing the game of supply and demand. In the opinion of Clay, Robinson & Co., hogs that are ready for market should not be held back, and country buyers would do well to keep close to the shore in their operations during the near future.

Sheep Trade Should be Better.

There should be better market for sheep and lambs under lighter supplies. The situation in the East has shown some improvement on the wretched condition into which trade was thrown by excessive marketing. The sharp slump in prices will undoubtedly cause the feeders to send their offerings to market with more caution, thus enabling sellers to resist pounding tactics, as the buyers are of course always on the alert to lay in supplies at lower cost. Not until receipts are cut down to lower proportions is there hope for a better trade. The feeding barns adjacent to Chicago are comfortably filled with Colorado stock, and until more of these are gotten out of the way much higher prices are not very probable. Not only were the Western points amply supplied late in April, but also those in the East. Thus packers were on easy street.

Sharp Decline in Receipts.

One of the prominent features of the live stock trade during April was the remarkable shrinkage in supplies, the combined decrease of cattle, hogs and sheep from the corresponding month of last year being 228,000 head. Cattle showed a falling off of 76,000; hogs 90,000, and sheep 53,000. There was as much desire to hold back supplies in the country in April as there was to rush animals to the shambles in previous months of the year. The sharp advance in prices during March was responsible for the contraction in the receipts, feeders regaining much of their lost confidence in the future of the market, though it must be remembered that the record-breaking supplies earlier in the year cut into the supplies deeply. It

was necessary to go back to 1899 to find an April run of cattle as small as last month, while hog receipts were the smallest since 1895 and those of sheep the smallest since 1903. Shipments from Chicago were comparatively liberal, totaling 513,368 cattle; 191,735 hogs, and 100,156 sheep.

Prices Break 25c@1.00

The month closed with prices for cattle showing 35¢@40¢ decline from the start of the month, hogs declining 30¢@40¢, and sheep and lambs indicating a loss of 50¢@1.00. This break in the markets was brought about largely because of the public cutting their meat diet on account of the high retail prices, which in turn narrowed outlet for dressed meats and caused packers to pound the market for stock on hoof. The tops during April were \$7.40 for cattle, \$6.45 for hogs, \$7.00 for sheep and \$8.35 for lambs, though best cattle late in April were secured at \$7.25; hogs, \$5.90; shorn sheep, \$6.00; woolled lambs, \$7.50; shorn lambs, \$6.50.

PRESERVING EGGS.

(Continued from Page 11)

ed, as it is readily accessible in the most remote places.

Water glass method—The other common preservative is water glass. This is diluted with from 10 to 20 parts of water, but even greater dilutions will serve when the eggs are to be kept for a short time only. We have observed that the stronger the water glass solution the less apt the yolks are to break when fried. Water glass gives better results than lime-water, but is difficult to obtain and quite expensive away from commercial centers. It should be given the preference wherever available, although very fair results can be obtained with lime-water. One lot preserved in 5 per cent water glass solution was still in very good condition the following March.

It is absolutely essential that eggs for preserving be perfectly fresh. They should be preserved within 24 hours to 36 hours after being laid. It is not safe to preserve eggs whose history is not known, such as those obtained from dealers. By following one of these formulas a fall and winter supply of cheap eggs may be had which is fully as serviceable for most purposes as high priced fresh eggs, and which will not have that peculiar stale taste so characteristic of shipped cold-storage eggs.

GOOD PROSPECTS FOR HOGS.

The Chicago Live Stock World summarizes the hog situation this way: Hogs are not coming to market as they were recently, nor are they showing up as numerous as a year ago. Packers insist that after oats and corn have been planted the heavy movement of hogs will be resumed, but stock yard people unanimously take the other view. Omaha and Sioux City have a mere handful of hogs, and if Missouri river territory was as well filled as packers claim, both those markets ought to be well filled at this juncture. The fact is coming to light that the winter hog crop has started to market at very deficient weight, and that not only is Chicago territory bare, but nothing is pressing on the market in the hog producing area tributary to Missouri river markets. More light pigs have been sacrificed during the past four months than ever before and they represent the butcher weights that usually satisfy shipping trade during spring and early summer. During the liquidation incidental to the winter season of low prices, thousands of bred sows were sent to the shambles, insuring a light pig crop. Stock yard opinion is that the pending scarcity of hogs will run into next year. What hogs are back are in strong hands, many of them being held at six cents in the country, a price requiring 6½ cents at Chicago. During corn planting the hog supply will be meager and some sensational markets will be recorded if the eastern pork consumer does not refuse to pay such high prices, as he has manifested a disposition to do recently. The only obstacle to the introduction of the seven cent hog is this balky disposition of the consumer to follow the price, and from now on the fresh meat demand will shape the course of the stock yard market.

WHAT A FARM DAIRY DOES.

Mr. Jno. McLennan, of New York, contributes an interesting article to the Rural New Yorker on how he recovered the fertility of a rundown farm of 56 acres, 40 acres of which he has under cultivation. The first year he plowed it to 10 inches deep and brought new elements of fertility to the surface. He hauled all the manure sweepings of Syracuse to his farm and spread it on it, by way of an Erie canal boat. The first year with this preparation of the soil he grew 1,800 bushels of oats of 40 pounds to the bushel, then he built a silo and went into the dairy business, after planting 800 fruit trees. He now maintains 43 pure bred Holstein cows, and grows enough feed on the 40 acres to maintain them and the horses necessary to work the farm, and next year will increase his cow herd to 50. He sells his milk from the farm and some potatoes and has sold \$2,300 worth of stock since first of October last year. He gets about \$100 worth of milk and sells that from the herd each month, and raises his best calves. He says with alfalfa he can grow three crops a year on his land now.

To use his own words: "I keep stock that would tax the capacity of the ordinary 150 acre farm, and do it with half the plowing, harrowing, seeding and cultivation. I grow upon

one acre nearly or quite as much as is ordinarily grown upon three." And every year his income is increasing from this 40 acres under cultivation. He says that with such farming as he is doing this country can maintain 300,000,000 as easily as 80,000,000 people. His chief industry now is the dairy and milk business, by which he manages to return fertility to the farm.

FARMS IN DENMARK.

Denmark has nearly 200,000 farms and farm-gardens of 10 acres or less, and about 100,000 farms of between 10 and 15 acres. There are less than 1000 farms in the entire kingdom of 500 acres or over, the aggregate of these last named being less than a million acres. There are 1,085 co-operative dairies with 158,170 members, 33 bacon factories with 91,000 members, and a co-operative egg exporting society with 500 local centers. The business transacted by these co-operative concerns is enormous.

YOUNG PIGS.

This is a season of the year when the young pigs need attention in order that they may grow off into healthy, strong constituted hogs. A tonic and blood remedy should be given the young pigs in the spring season of the year in order to clear them of every vestige of worms and to put their blood in first class condition, so they will grow off strong and thrifty without runts. When the young pig is started this way and he has an occasional dose of a tonic or worm remedy that can be relied on, he will grow into a healthy, thrifty hog in a short while.

The Snoddy Remedy, which is manufactured by the Dr. J. H. Snoddy Remedy Co., Alton, Illinois, is considered to be the best remedy for producing health and thrift and growth in young pigs, by feeding it to the sow and also to the pigs when they are old enough to eat, that there is now before the public. This remedy is one of the cheapest remedies on the market. It is one of the greatest worm destroyers and thrift producers known to medical science. Forty cents worth of it will carry a pig from his birth to the market and will cause that pig to weigh at least fifty pounds more at market time than he would have weighed raised the ordinary way. So it is a very profitable remedy to use. It purifies the blood of the sow and produces a healthy milk for the young pigs and destroys even the eggs of the worms that may be in the pigs, so they will start off clear of worms. Then an occasional dose along through life will keep them clear of worms and in fine condition.

Snoddy's book on Hog Cholera fully explains the methods of using their remedy on young pigs. It is free to anyone who will write for it. Address The Snoddy Remedy Co., Box 290, Alton, Ill.



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HORSES Going Blind, Barry Co. Iowa City, Ia. can cure.

SITUATION WANTED—Take truck farm on half share; other work as labor, for wages. CARL WAGNER, No. 448 West 33rd St., New York City.

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Wasn't Your Neighbor Foolish?

Didn't he make a chump of himself? Wasn't it about the most senseless thing he ever did when he bought that "cheap" cream separator from a "mail order" concern that never manufactured a separator of any kind, and switches from year to year to the separator that can be bought the cheapest? Where is your neighbor going to get repairs? Why, he doesn't even know who built his separator, and the most important thing for a man to know when he buys a "cheap" separator is where to buy repairs every week.

There stands your neighbor's separator, down and out; broken; only used a few weeks; money wasted. Perhaps he could repair it if he knew where to get repairs, but he doesn't know. The fact is, there is no place to get them; his separator was one of a job lot sold "cheap" by a manufacturer who knew it was no good, and who unloaded his stock on a catalog house for what he could get. Now he's out of business.

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from the
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Easy to oil
Easy to turn
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Low supply can
No dirty oil cups
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*Simple, durable,
convenient, hand-
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able.*

No Wonder They Are Pleased

Didn't Like Mail Order Separator

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The Tubular gives us perfect satisfaction. The longer we use it the better we like it. We bought one of the improved — — — of — — —, of Chicago, last spring, but we didn't like it a little bit. It was hard to run, hard to wash and hard to keep clean, while the Tubular is easy to run, easy to wash and easy to clean.

L. W. WHITNEY.

Discarded Mail Order Separator

ROBERTSONIA, PENNA.

After using a mail order cream separator for six months I decided to discard that machine and purchase a No. 4 Tubular Separator. The mail order separator would separate only 25 pounds of milk per hour, and did not give a thorough separation. I can skim two buckets of milk in 4 minutes. The mail order separator required ten minutes. I am more than pleased with the purchase I made from your people.

WM. F. BUCKS

Why didn't your neighbor do as you are going to do? Why didn't he buy a **Tubular Cream Separator**, built and guaranteed by the largest cream separator factory in the world and the oldest in America. For twenty-eight years we have been building cream separators at West Chester, Pa., and TUBULAR separators are used in every dairy district of the world.

Tubular Has No Rival

ZIMMERMAN, MINN.
Tubular shows no wear after three years and has never given me any trouble and from present appearances is good for a lifetime. One of my neighbors bought a — — — about a month before I bought mine, and it went to the scrap pile months ago. For skimming the Tubular has no rival in my opinion. JOHN M. COOK.

We know how to build separators that will wear, and we are always where you can reach us when you want us. That's something you can tell your neighbor about TUBULARS. Maybe he would like to get right. Maybe he would like a little help. Probably he would like to have a TUBULAR if he could get a little something for his "cheap" separator. Maybe we can help him. Won't you suggest that he write for our new catalog No. 300? It tells all about it.

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Vol. XIV

JUNE

1908 No. 4

DOES IT PAY TO GO TO COLLEGE?

I will begin the answer to this question by stating a few facts. Thirty-two per cent. of the Congressmen of the United States have been college graduates; 46 per cent. of the Senators, 50 per cent. of the Vice-Presidents, 65 per cent. of the Presidents, 73 per cent. of the Justices of the Supreme Court and 83 per cent. of the Chief Justices of the Supreme Court of the United States have been college graduates. In addition to the above you must also include the large number of literary, business and professional men. Less than one-half of one per cent. of the people of the United States have been college graduates; so you see that all of these have been chosen out of the very small number that have finished college courses.

The fact that such men as Abraham Lincoln have risen to such eminence without a college education is no argument against college courses for young people. They were geniuses—men of much more than natural ability—and could see their way clear to accomplish great things. And yet even they might have done more for the world if they had been fortunate enough to have received a college education. It is well known that they lamented the fact that they had not the advantage of college courses.

It is admitted that a man of average ability, with a little education, may succeed as a farmer, banker, merchant, artisan, and sometimes in the professions, but in nine cases out of ten they would succeed much better if they were educated.

A college course, however, brings much into a man's life besides the ability to succeed in his undertaking. It opens up to him a world that the uneducated man can not comprehend and, of course, can not enjoy. It brings into his life the treasures of literature, art, science, and history that furnish a never ending source of pleasure and power. Indeed, this is the greatest good to come from a college education, for one may by close application to duty and business acquire the intellectual power that will enable him to succeed in business, but the power gained this way does not carry with it the world of thought, culture and power opened by the study of literature, arts, sciences, mathematics and history.

A business man once said to the writer: "I can make money and I have succeeded in business but I would willingly give you \$10,000.00 for such an education as you have and do not need and use." This statement illustrates the fact that a college education brings into a man's life something that business experience can not furnish.

HOW ABOUT THAT MANURE SPREADER?

It seems incredible, but there are still a number of farmers who continue to spread manure by the old fork method—or are letting it rot in the barnyard—which means less farm profits.

The manure spreader has come to be a farm necessity. The farm can only be made to pay by keeping the soil in the highest state of fertility. That means making the most of the

manure, the best of all fertilizers and the only one that is produced on the farm.

All agree that manure can be made to go farther and produce better results by spreading with a machine than when spread by hand. The popular estimate is that the spreader doubles the value of the manure. If this be true, or approximately true, it will be easy to arrive at the conclusion that a spreader will pay for itself in increased crops and soil benefits in one or two years.

The old way of handling manure was wasteful in the extreme. First, it was allowed to wash away and ferment in the barnyard. Then, at a convenient season, it was hauled out and thrown in piles in the field, and the same wasting process was continued. Finally, it was spread by throwing it in forkfuls and in hard lumps over the ground, leaving it in a condition in which the ground could not get the benefit of even the fertilizing contents still remaining.

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The manure is pulverized and spread evenly, so that it is immediately available for plant life. The first shower that comes along after the spreading washes the whole into the soil. There is no waste. And with such a machine always at hand, the farmer is induced to spread the manure at the right time, while it is fresh, thus getting all the value for his land.

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Take a ¼-inch soft rope, 18 or 20 inches long, with a slip noose on one end and a light harness snap on the other. Throw the shoat on his left side, set your left foot upon his neck and slip the noose upon his right hind foot. Draw the foot forward, wrap the snap end of the rope around your left ankle and proceed. If the operator is left-handed, reverse part of the operation. By this method I can catch and castrate shoats weighing 80 or 90 pounds.—J. W. Evans, Mulvane, Kan.

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To close a partnership, will sell below value. 2 Solid Sections McIntosh Co., Southern N. Dak. Good soil, large portion tillable, abundant grass, nice Lake near R. R. and Co. Seat that shipped \$60,000 worth wool last year. 13 cash, balance, time to suit. School Section adjoining can be rented cheap. For full particulars write JOHN A. BOWMAN, 505 7th St. Rockford, Ill. Cut this ad out. It will not appear again.

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United Incubator & Poultry Supply Co., Dept. 16, 26-28 Vesey St., N. Y. City.

Bull born Feb. 27, 1908. **Stee-Topsy** Ormsby Prince, whose two nearest dams have official 7-day butter records averaging 26.9 lbs. each, their milk averaging 4.88 per cent. fat. **Dam—** Amarilla Maid Ormsby, with an official record of 378 lbs. milk, 11.85 lbs. butter in 7 days as a 2-year-old. Her dam, Amarilla's Maid, has an official record at 4½ years old, of 425.1 lbs. milk, 18.1 lbs. butter in 7 days; and the latter's dam, Amarilla (imported) has well verified records of 92 lbs. 5 oz milk in one day, and 20.132 lbs. 15 ozs. in one year. This bull is a splendid animal, well developed, beautifully formed, handsome and attractive. We offer him to you with a helper of equal quality and breeding, for the very low price of \$100.00. The pair are just what you want for foundation purposes. In establishing a herd, everything depends upon your foundation stock. Be sure to start right. The price named is for the two animals carefully crated, F. O. B. the cars, registered and transferred to you on the records of the H. F. Association. This is a very special offer and cannot be repeated after our present stock is reduced.

JUNE

BLOODED STOCK

For Practical Stock Breeders and Feeders
Published on the Twenty-fifth of each month
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Dr. H. L. Patterson, President
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On this page you will find our subscription offers for the season. You can save money by using some of these offers. We want your subscription at once. Please attend to it so that there will not be any delay. We do not intend to send our paper to those who do not want it, so we wish a prompt reply to this notice.

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3. Send three new subscribers, each for one year, and one dollar, and get Blooded Stock free for one year.

Clubbing offers will be found on another page.

BLOODED STOCK for June—1908.

HORSE NOTES

WHEN A HORSE BALKS, no matter how badly he sulks or how ugly he is, do not beat him; don't throw sand in his ears; don't use a rope on the front legs, or even burn straw under him. Quietly go and pat him on the head a moment; take a hammer, or even pick up a stone in the street; tell the driver to sit still, take his lines, hold them quietly, while you lift up either front foot, give each nail a light tap, and a good smart tap on the frog; drop his foot quickly, and then chirp to him to go. In ninety-nine cases out of a hundred the horse will go right along about his business, but the driver must keep his lines taut and not pull or jerk him back.

IT IS A VERY SLOW HORSE that will not walk more than two miles an hour, while a good walking horse will go three miles an hour, and some will do even more than that. Let us do a little figuring and see what would be accomplished. We will start with the two-and-one-half-mile gait, and there is scarcely a farmer who is willing to admit that his team is slower than that; but we will take that, and for convenience count it, at ten hours a day, twenty-five miles; that looks rather large when we are plowing sixteen-inch furrows. It takes a little less than six miles of travel to plow an acre, so you see by the time we have reached the twenty-five mile post there are about four and one-third acres plowed. Pretty big, isn't it? Well, three acres a day, that will do, then; a little over seventeen miles will be traveled, which would be about one and one-fourth miles an hour.

WHEN THE HALTER is put on the colt's head for the first time, and we pull at it, every one is fully aware that the colt will go backward; but we rarely stop to consider why this is so. But he feels he has his head in some kind of a trap, and he knows but one way to get it out, and that is pull his head out of the halter. If he got his head fast in the fence or anywhere else he would go backward to get it out, and would struggle even to the breaking of his neck if he did not succeed. If he gets his front foot over a bar or a barbed wire fence he will go backward to pull it out.

IF A HORSE ATTEMPTS TO PASS through a narrow passage and he reaches a point back of the center of the body, he goes on through, even if it crushes his hips to do so. If he gets his hind foot fast he invariably goes forward to pull it out; therefore, the hitching of a balky horse by the tail will oftener succeed in pulling the load without a fight than any other known process. With a knowledge of these laws many of the difficulties with what are called stubborn or unruly horses can be obviated. To illustrate: In educating the colt to the halter place a small rope around the body just in front of the hips, in slip-noose fashion, pass it under the body between the forelegs, under the nose-band of the halter, and then with the halter strap in one hand and this small rope in the other you begin by pulling on the halter rope slightly at an angle, and at about the instant he is going back give a sudden pull on the rope, which will naturally impel him forward—the direction we wish him to go.

FOR THE INVETERATE HALTER-PULLER, put a strong rope around his body in the same manner, passing the rope through the ring of the post or manger and then back to the ring of the halter—virtually hitching him at both ends; then, when he goes back into the halter, he finds himself not only hitched by the head but also fast at the rear end, and to relieve himself of this difficulty he naturally springs forward, and if kept hitched in this manner for a few days or weeks the habit will be cured, and even an ordinary string will suffice to restrain the confirmed halter-puller.

BEST TYPE OF BERKSHIRES.

By Prof. William Dietrich, Urbana, Ill., Before the American Berkshire Congress, May 24-27, 1908.

The subject assigned for discussion is "The Best Type of Berkshire." That immediately takes us to the door of the vital point among different breeders. It is one of the most distinct things to be observed by people who visit the different herds that there is a distinct type, a very distinct type, in different herds. It puts a man like me in a very embarrassing position to try to outline a type, which from my standpoint is to be the most profitable without treading upon somebody's toes. I do not like to hold up anybody's type or put down anybody's type, but I am one of the kind of fellows that like to learn and tell the truth.

Berkshires Difficult to Breed.

You all know how difficult it is to breed an ideal Berkshire. I have been around to a number of herds and have tried to select individuals that were good enough to put into our herd and I succeeded as a whole in finding but very few individuals in the entire Berkshire family of the country that may be considered as first class.

If you ever undertake to make a drawing of this kind you would also appreciate how difficult it is to do that. I had a drawing last year that did not suit me, and I see it is copied on the backs of two catalogues that have come to my hands and I would like to see this thrown out. I

have one that suits me better and when I get home I will have one made and anybody that wants one, if you will write me, I will send you one.

Now the type of Berkshire that we want is the one that will come nearest being the ideal from the standard of excellence and at the same time grow the largest number of pounds of pork when a hog goes to market at any given time.

In a meeting of this kind we are apt to consider one side of the question. We are a body made up very largely of pure-bred Berkshire breeders. We do not stop to think that the ultimate end of our hog is the butcher's block. How long will the demand to sell to one another last? Soon all will be filled up and the new breeders that come in will not furnish an outlet and all will be swamped. So the thing to have in mind is the market end of the situation.

We hear a great deal of discussion nowadays of type. First there is the breeding type and the other so-called show yard type. People will say that you cannot have a hog of the show yard and they will say you cannot use the breeding animal in breeding condition in the show yard. Those are the conditions which we find, which is exceedingly unfortunate and ought to be remedied. I think they will be remedied in a few years as soon as somebody is able to tell us how to feed. When this work is completed we shall, I think, bring together these two types, one the show yard and the other the breeding type.

A small mischievous boy can scare a lot of milk out of a herd of cows in a short time.

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to the user is greatly increased. We firmly believe it to be as near absolute perfection as possible for the purpose. Wire drawn from the steel is hard but not brittle. It is stiff and springy but pliable enough to be properly spliced. It is live steel—not dead steel. So that every wire in American Fence as now made is a live wire, doing business all the time and—Always absolutely reliable against emergencies. Dealers everywhere—one in your town. See him—examine the different styles—test—compare—and judge the merits of the fence.

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In all the literature we have on swine the standards of excellence which have been adopted by the various associations of different breeds we find no distinction. We have one standard of excellence adopted and used for every purpose. Unfortunately under these conditions the standard that has been adopted in the show yard was a standard of excellence that was adopted to the market and not to the breeding hog. Here is where we have gotten into a great deal of difficulty because the breeders did not distinguish between the market requirements and the breeding requirements. I have had the good fortune since coming to Illinois to make a thorough study of the market conditions as well as the breeding conditions. I have prepared Bulletin 97 on the Market Grades of Swine. I made a thorough study of the Chicago market as well as the bacon markets across in Canada and I think I have a pretty good idea as to what a market hog ought to be, and I find that the market requirements have changed very materially. There was a time years back when a strictly fat or lard hog was in demand. Since then the market has changed somewhat to the bacon type of hog. The market has changed from a lard or fat hog to a hog of only medium lard or fat type. The market demands a type that carries plenty of lean meat and not an excess of fat.

The show yards during the past years have laid too much stress upon the market conditions as they existed in past years; have laid too much stress upon high condition when put on with fattening food. You all know that in a hog you can cover a multitude of evils with fat, and a hog can be made to lay on a good deal of fat and especially on the back. The back is the first thing that is noticed by the judge and the judge was carried away too much by the first appearance of the animal and he perhaps has not had an opportunity to study the animal point by point. Conditions are rapidly changing. We are coming to the time when we will bring the two types together. At the Illinois University in our work we have made up two standards of excellence, one for the market hog and the other for the breeding hog.

Standard Excellence of the Breeding Hog.

I shall confine most of my discussion, however, since this is a meeting of breeders, to the standard of excellence of the breeding hog, the ideal type of the hog for breeding purposes. In making up our standard of excellence I have taken under consideration the animal as a whole and then the various parts in some logical order. In some way that will make an impression on the mind and that can be followed by a man of average intelligence, and be within the reach of the people. The first thing that comes to a man's notice as the hog is driven into a ring, or as a man goes to the animal, is his size. The size of the animal is one of the most important parts of the animal when it goes to market and this must not be left out. The size of the animal is determined very largely by its feed. That, perhaps, is rather a bold statement for me to make before this body, but I honestly believe that an animal can be fed from a pig so it will never grow to more than 400 pounds and

THE BEST CREAM SEPARATOR

And the Difference in Cream Separator Advertising

All separator advertisements seem very much alike to the average reader, who is at a loss what to make of them and how best to attempt guessing which may be the best machine, where all claim to be the best and all appear to be about everything that could be asked for.

THE EXPLANATION AND THE SOLUTION ARE TO BE FOUND IN THE DIFFERENCE BETWEEN DE LAVAL AND OTHER CREAM SEPARATOR ADVERTISING.

The De Laval Company has always stuck to the old fashioned plan of having its advertising written in its own offices, by the men who make and sell its machines and have been doing so for years, and who know no more about advertising than to describe as simply and best they can the merit and efficiency of the machines they offer to the public.

Practically every other separator concern of any consequence has its advertising composed and in great part "invented" by professional agencies and hired advertising writers, located in the big cities, who could not themselves tell the difference in looks between a cream separator and a corn sheller, and who take up the advertising of everything that comes to them, from needles to automobiles, for anybody able to pay for their services, just as does the lawyer for any client who comes along, whether the case is good or bad and the client right or wrong.

It is up to these professional composers of prose, poetry, fiction and romance in an advertising way, and the professional artists who work with them in illustrating their productions and putting them in showy and attractive shape, with their wide knowledge of what "takes" with the public generally, to claim the utmost of their prolific brains can evolve for the separators they are retained to advertise.

What these professionalists all do know, or are at any rate first told, of cream separators is that the DE LAVAL machines and the advertising descriptive of the DE LAVAL machines are the ESTABLISHED STANDARDS by which their advertising productions must be measured, and MUST ENLARGE upon in some way, or else they will stand little show of drawing any business for their patrons.

As a result, the biggest advertising claims are frequently made for the poorest and trashiest separators. The biggest advertising done and the biggest claims made are by jobbing and "mail order" concerns who don't even make their own separators at all, but simply buy them where they can buy them cheapest, and who are almost invariably selling a machine which has already proved a business failure once or twice before under a different name and a different coat of paint.

When the DE LAVAL claim was justly made of saving \$10.—per cow every year for its users one of the poorest and cheapest separators ever produced put out a claim of saving \$15.— in the same way, and since then another has come along and made it \$20.— The next may as likely make it \$25.—

BUT IT IS THE MACHINE AND NOT THE ADVERTISING THAT SKIMS MILK POORLY OR PERFECTLY AND LASTS TWO YEARS OR TWENTY YEARS AFTER THE BUYER HAS PUT HIS MONEY INTO IT, AND THAT IS THE DIFFERENCE BETWEEN THE DE LAVAL AND OTHER CREAM SEPARATORS. SMALL AS THE DIFFERENCE MAY SEEM IN THE ADVERTISING CLAIMS MADE.

THE 1908 DE LAVAL catalogue—to be had for the asking—is an educational text book of separator facts, of interest to all who read and think for themselves.

THE DE LAVAL SEPARATOR CO.

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173-177 WILLIAM STREET
MONTREAL
14 & 16 PRINCE STREET
WINNIPEG
107 FIRST STREET
PORTLAND, OREG.

that the same animal could have been made to grow to 600 pounds. That is one of my points in the discussion of the method of feeding. Now the standard that I have adopted for weights I gave to the Association last year and I have no occasion to change it, although I have been severely criticized. Weight at 6 months, 200 pounds; 1 year, 400 pounds; and two years, 800 pounds for an animal in ideal breeding condition. Some people say that is altogether too heavy. It may be at certain points a little too heavy, but I like to have an ideal toward which we can work. I don't mean this as an outstanding individual, but as an average. There are individuals that weigh more than 800 pounds at two years, and more than 400 pounds at one year, and more than 200 pounds at six months. It is also known that an animal made to grow too large at six months will not grow so large later. You feed a pig to weigh 300 pounds at six months and you will not get him to weigh more than 800 pounds at two years. The saying is that you can never make a show yard hog out of a show pig. There is a whole lot of truth in the old saying, but it is not so true at this time. By way of justifying my point in weights I will say we have a gilt due to farrow this week that weighs 425 pounds.

The Use of the Score Card.

The only object in the use of the score-card or standard of excellence is to teach what the animal is made up of. Before a man becomes trained he looks at the animal simply as a hog. You take a young man who comes to the college and you drive two hogs into the ring that are very dissimilar in every respect and at first he can't tell one animal from another and by the use of the score-card you have the animal cut up, so to speak, and you get him to see the animal not as a whole but in parts. When the animal comes into the ring the student is to see that it has hocks on its hind legs, it has a snout, heart girth, back, flanks, shoulders and various other points. This is the object of the score-card, to point out the various other points of the animal and to get a person acquainted with the points and be able to put them together. Until a man is able to do that he is not a competent judge because no man that is not able to see an animal by its points ought to be qualified to go out into the show ring and say which is the better animal. Some judges in the past have not been trained in this way and sometimes they gave the largest animal the award.

In the standard of excellence of the breeding animal we have more points than the market animal and give them different values.

On weight of the animal I give 9 points. If the animal at six months weighs 200 pounds I give him the full score of 9 points. If the animal weighs only 100 pounds we cut down the score, giving him 4½ points. Weight of an animal is the first thing that strikes me.

The next thing is style. We want an animal that has style, has a good appearance, that stands up, is bright, sleek and attractive, for such an animal is better for breeding or market purposes, and I have given it two points.

The next point is action. We don't

ordinarily talk about the action of a pig as we do the other animals, but I have come to believe that action in a pig is one of the most important points. When an animal has a good deal of spirit, that walks off in a straight line and one that steps regular and spirited, and at the same time walks free and easy, that animal is all the better animal and possesses great stamina and is better in every way than the animal that is lazy and does not have the ability to get up and walk. I have given 4 points to this part of the animal.

Form.

Next comes form. Long, deep, broad, symmetrical, compact, standing squarely on legs of medium length, 8 points. We want to consider the animal as a whole. We want it properly put together. He might have all the points but if he did not have them put together right he would be thrown out. In order to be right in form he should have length. That is one of the strong points in the Berkshire. Some Poland-China people in the past used to prefer an animal that was short because he was prettier, but even the Poland-China people have recognized their error and are now breeding for length. The first consideration in a Berkshire is to have length. It is much more difficult to get a good long animal than it is to get a good short animal. It is the long bodied Berkshire that produces weight, gets large litters and cuts out the ideal bacon sides for which the Berkshire is known. With this we want depth of body. This is another consideration that adds weight and increase of a high priced cut, bacon sides and low hams, and a Berkshire must also have breadth. We don't want the Berkshire to look like a razor-back. He must have width; he must be symmetrical so the parts are proportionate one to another. He must be compact. He

must stand squarely up on legs of medium size, and this is a place where a great many of the breeders make a mistake of getting a hog with too short legs. Hogs that are so close to the ground never get up to weigh what they ought to weigh. Putting all these together we have what we call form, and have a hog that is desirable. This is given 8 points.

There are other conditions that should be taken up with the length of the hog. We don't want the length

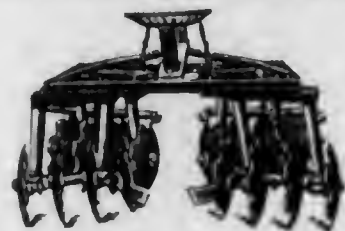
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of the hog to be in the shoulders or neck, or in the head, where some of them have it. I find where they have length in the shoulders and neck it is one of the most prepotent qualities to appear in the offspring and is hard to eradicate. We want length from the shoulders back.

One of the most important points is the constitution of the animal. By constitution we mean the animal that has a capacious chest. That is where the heart and lungs are. This is indicated by having the brisket or breast bone extended forward and well down. When you find an animal that is good in constitution we almost always find that the flank is well let down. This is one of the best ways to see if an animal has good constitution. If he is cut up in the flank you know he has a poor constitution. Here is one of the weak points of the Berkshire, not deep enough in the chest. Instead of being on a line with his belly it is up several inches. So we want an animal with chest capacious, brisket advanced and low flanks and well let down. This is given 8 points.

Quality.

The next point is quality, which appears to us as the animal comes to our view. Hair fine, bone fine but strong, skin smooth, even covering of firm flesh, free from lumps and wrinkles; features refined but not delicate. This is important. We do not want him too delicate. Many animals are too fine and do not have the constitution to do the business.

Condition, given 5 points, is the next point on my score card. We want condition that shows thriftiness but not too fat. It is of considerable importance in the market animal. You can take an animal of very ordinary form and put it in good condition and thereby improve the form. We do not lay too much stress upon condition. We do not want an animal that is excessively fat.

Color.

Coming to color we have rather a delicate point. I give it a value of 2 points on my standard of excellence. The way I have written it out here I will give it to you and you can take it for what it is worth. Color—Black, with white in face, on feet, snout, tip of tail, and an occasional splash on arm. Tinge of copper or bronze color or white on ear or jowl or black points not objectionable. An occasional white spot on body, white on under side of neck and chest, and white forelegs not disqualifying. I think when we have a good individual if it does not have the ideal markings we ought not to discard it. We ought to breed for individuality and not for fancy.

Coat.

The next point I have is coat. The coat should be abundant. We want to give the animal enough of a covering so he can go out on ordinary cold days and be comfortable. The hog is one of the most susceptible animals to cold and he can not stand out and eat his food on a cold, windy day, so he must have plenty of hair. This coat should be of fine hair, straight, bright, smooth and evenly distributed over the body. He should not have a lot just around his head and neck but he should have hair all over him. The hair stuck out straight, rough and uneven is a sign of unthriftiness. Coat is given 3 points.

Minor Points.

Snout I have given 1 point. We lay a great deal of stress on snout, position and length, but it is a point of minor consideration, and I think that is a place where we go a step too far and we have become cranks on the snout, to such an extent that the pig can not eat out of a trough. So I say, Snout—medium length, heavy but not coarse, which is an indication of ruggedness. By snout I do not mean face. That comes later.

The eye is given one point, which is a minor consideration in a hog. The eye of the Berkshire should be full, indicative of intelligence; should be bright. A dull eye is seen when it is unthrifty. You can always tell if an animal is going to die or get well by its eyes. The eyes should not be obscured by wrinkles. Many of them are so obscured that they can not see. Others have specially clear eyes.

The snout takes up about this much. The face takes from between the ears to the jowl and nearly straight down to the neck. Now the face at this point should be well dishd, short, broad between the eyes and ears, and smooth. Many of them are too much wrinkled back of the eyes and wrinkled throughout.

Ears—I have made its ears erect but when inclined forward not to disqualify, fine texture, medium size, neatly attached and there should not be any excess of skin and wrinkles.

Q. How much do you give to those points?

A. Snout, 1 point; eyes, 1 point; face, 2 points; ears, 1 point.

Now the jowl I think it is necessary to modify the standard of excellence to fill the market requirements. The market nowadays does not demand a heavy jowl and the sooner we cut that out the better off we will be. I have made the consideration of the jowl to read: Jowl—firm, smooth, medium size, not pendulous. We want a jowl when an animal is up that is firm, that does not flap around like a cow's bag when she walks. It should be right underneath the head of the animal and not be too large, but medium in size. This is given one point.

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It loads Potatoes, Grain, Stones, Etc. It saves your back—cost low. If you don't buy it you pay for it any how—in help. Send for circular.



Simplex Wagon Loader Co., OXFORD, PA.

The neck is given 2 points, and it should be medium in length, deep, moderately thick, joining the head to the shoulders smoothly. We don't want a neck that is too short or that is too thick. The old standard calls for a thick neck, especially at the upper part. This characteristic of the Napoleon hog, one of the top crosses



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in making the Berkshire. The breed was made up of the old Berkshire, the Neapolitan and Siamese hogs and it would be possible of the Berkshires we have to-day to select animals of these types, the old Berkshire and the Neapolitan. That is one of the difficulties we meet. I claim it is easier to breed a good Poland-China than it is to breed a good Berkshire, because the Berkshire is a hybrid and the characteristics can separate themselves. In the Poland-China we have a conglomeration of many breeds and the types and characteristics were so broken up that we have a new breed which is not true in every sense of the word in the Berkshire breed.

Important Points.

Shoulders I have given 5 points. They should be deep. We want them to come from the top to the bottom. The shoulders should be well filled down on the legs deep, compact, not too heavy. The shoulders should set into the body smoothly.

The back and loins is one of the most important parts of the animal and is given 9 points. It should be broad. The back and loin take in from the shoulder to the rump. In a hog we have this piece cut out as one piece and it should be taken into consideration together. Of course an animal should be broad at the loins as in the other parts. The back should be nicely arched, at least straight so it will never sway, and should be of even width as broad at the loin as it is back of the shoulders. The back should come out nice and level on top and the width carried out so we have a nice curve. When you have a fish back you don't have enough lean meat for pork chops.

To sides I have given 7 points. The sides should be long, deep, firm, full even width, free from wrinkles, ribs long, carrying fullness well down. The sides of the animal taking from the shoulders to the hams and from the back to the belly should be long; should be deep and should be firm, a side of good meat, lean and fat, the more lean the better, because a fatty side does not make good bacon. Firmness is the result of lean and plenty of lean meat intermixed with fat is what we want. The sides ought to be even. Many hogs are narrow in the forward end of the sides and they are weak in constitution. That makes a very undesirable side. You want plenty of length, smooth and not wrinkled and not coarse.

Belly is a minor consideration. I have given it 2 points. It should not sag down in the middle, because that is a sign of being flabby. The belly is always narrower than the back. When an animal is light on the underline we have an undesirable characteristic and one that is very often overlooked by the breeder. We want the belly wide and straight down so that the animal is practically as thick through this part as it is through the back.

The rump should be long, wide, even width, thickly and evenly fleshed; rounding from loins to root of tail; not too drooping. I give this 4 points. Here is where we make a serious mistake, many of them are too sloping. Sometimes we find a roll of fat around the tail. That is undesirable as it is a waste. You want a rump that is carried well up and is broad and even in width. You

don't want a rump that is broad here and narrow at this point.

Hams is the next point. The hams should be broad, especially at the upper end, deep, full, well fleshed and plump, not too fat. This, perhaps, is the one point above all others where the breed is lacking. There are very few Berkshires that are ideal in hams. I do not know where to put my hands on one. They have good back and good in the hams at the upper end. To hams I give 9 points.

Legs should be straight, strong, tapering, medium length, set well apart; bone smooth; joints clean; pasterns upright, feet medium size, not sprawling; squarely placed—given 8 points. That explains the whole thing in a nutshell. Have the legs nicely tapering and not too large close to the feet and have the hind legs come straight down from the hock both as you look at him from the side and from the rear.

Tail—medium in size and length, smooth, tapering, not set too low—1 point. When it is coarse it indicates coarseness in quality and you do not want it set too low because it would give too much slope to the rump.

ON REGISTRATION.

The foaling season is now on and trotting foals will make their appearance rapidly at every stock farm on the broad continent. Within 30 days after birth, if the foal is healthy and well developed, it should be registered, and the certificates of registration should be placed in the farm's file book so that it can be produced at any time for the inspection of visitors and probable buyers. This rule applies equally true that on a large, well conducted breeding farm, the service books are carefully kept and the superintendent and his assistants know every mare and foal and there is hardly the possibility of a mistake, but the private records of the farm are simply the basis for the information which the register authorities must have before they can issue the certificates of registration. They enable the owner or the superintendent to give full and accurate description of the breeding of sires and dams, besides most important of all, fastening the evidence of the absolute identity of the foal. In large farms where from 25 to 100 foals come each season, and where two or more stallions are kept in service, there are many reasons why the crop of foals should be registered early in the season in which they were foaled.

What is true with the big breeder is doubly so with the owner of one or two brood mares. If he is not a man of strict business methods he may neglect to keep the receipt of the stallion service. If the stallion belongs to a careless owner he may neglect to enter the name and pedigree of the mare in his stallion book, and if the owner of either the mare or the stallion dies it is almost impossible to verify the pedigree. But beyond these good reasons is the patent fact that the trend of owners for the last few years is to sell as soon as possible and as a result both large and small breeders consign not only two-year-olds, but often yearlings and weanlings to the auction sales. It is all very well to put in the catalogue the words "Standard Bred" but unless the two words can be added "and register-

ed" it does not impress the buyer. If the youngster is from a well-known breeding farm he knows that the pedigree is all right, but the trouble of registration is considerable by a new owner. If the would-be bidder is not well acquainted with the rules of registration, or is a foreigner, he either passes the colt over or just bids on his individuality.

There is also another reason why the youngsters should be registered as early as possible. The Register is not like the Year Book, it is not published annually, and when a colt is not registered till three or four years old and just misses being in the Register published about that time it may be six or seven years before he appears in the published records. We hope to see the day when all the trotting produce of one year will be compelled to register in that year and that the association will then see its way clear to publish in the spring of every year a volume of the Register, bringing the registration strictly up to date.

Curing an "Interferer."

Most horses that interfere do so because the horseshoer has failed to properly level and balance the foot. Suppose you try another plan, that of letting nature level the foot. Pull off the shoes and trim the feet well to prevent breaking of the hoof. Allow the animal to go barefooted until the feet are well worn down, and then apply the shoe without changing the level of the foot. Very few horses interfere before having been shod at all unless feet are badly overgrown.—G. H. Glover, D. V. S., Fort Collins, Colo.

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In almost every outbreak of cholera you will find hogs very wormy. They get a hog out of condition and unthrifty. Then it is an easy prey to disease. The Snoddy Remedy will destroy every character of a hog worm. Even the liver and lung worms, which are the most dangerous, are easily destroyed with the Snoddy Remedy. Ten cents worth of the Snoddy Remedy will clear out the worms and purify the blood of a hundred pound shoat, so that he will be worth one dollar or more in a few weeks than he would have gained without this remedy. Can't you afford to invest ten cents per head to make your shoats worth a dollar per head more than they will without this little investment. Then why waste time and feed on wormy, runty hogs when it is easy to have them thrifty.

It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

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WHAT THE CORN SHOW MEANS TO THE MIDDLE WEST.

Throughout the agricultural west, the villages, towns and cities grow and develop at about the same rate that the farming community around them develops.

Country homes are built and improved; herds are established and increased and farm implements bought and paid for, according to the resources of the farm, as shown by the cash crops sold.

When the corn crop goes wrong, business goes wrong. The manufacturing, jobbing and retail interests of the west note carefully the crop conditions from week to week and they gauge their business, in a large measure, by the corn barometer.

Land values are sustained by the earning capacity of each individual acre, just the same as industrial stock values are sustained, according to the earnings and security of stocks.

When good crops are sold at fair prices, the necessities of life, such as groceries, clothing, feed, farm implements and school books, are freely purchased and then, perhaps, the piano—the son and daughter are allowed to attend the high school or university.

A decrease in corn production is reflected throughout almost every channel of industry. The railroad lines build no additional cars; train crews are laid off; factories are operated only half time; the grocer and the clothing merchant order sparingly.

The educational campaign, along agricultural lines, that has been conducted in recent years, such as seed corn special trains and farmers' institutes, has yielded large returns. The states of Nebraska and Iowa alone have given an increase of more than fifty million bushels of corn in three seasons. What did it mean to you and to your business to have \$20,000,000 or \$25,000,000 additional placed into the channels of business in these two states? There are no business interests which failed to share this increase, directly or indirectly.

Not the least of the benefits are the surroundings found in the farm homes. As each new problem of nature's methods of producing crops unfolds itself to the corn grower, he entertains a higher notion about his future plans. There is less talk about

renting the farm and moving to town. At least 5,000 exhibitors will compete for prizes to the probable value of \$50,000. The National Corn Exposition stimulates interest in better corn and better grain upon thousands of farms.

To produce a prize-winning ten-acre sample of corn means work—intelligent plans and well directed energy, that always prompts the growing of better crops on the entire farm. A forty-acre field with a larger yield and better quality of corn will influence many other farms in that community. There is both fascination and profit in producing larger yields and better quality of grain and live stock. Striving to win a prize means getting better acquainted with nature's way of producing plant life. Success, satisfaction, contentment and prosperity seem to blend in one harmonious whole. Better equipment, better homes and better citizens are sure to follow, where these educational campaigns are properly directed.—World.

THE ANIMALS' FRIEND.

Statistics show that the average cow loses ten dollars' worth of milk and flesh every summer just because flies and insects worry her so. There isn't a farmer or dairyman in the country that wouldn't gladly spend forty cents a year to save the cow this worry and save himself this loss. And he can do it with forty cents' worth of Shoo-Fly.

Shoo-Fly kills every fly it strikes and one spraying a day is enough to keep off all insects. It isn't a cure all, but it does cure sores, barb-wire cuts, and hoof troubles, and makes stock proof against Anthrax and Texas cattle fever. It has nothing in it to hurt man or beast.

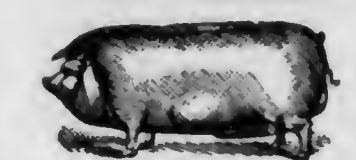
The ingredients cost the manufacturer more this year than ever before, but in spite of this they have reduced the cost of Shoo-Fly to the consumer. For \$1.00 the Shoo-Fly Manufacturing Company will forward their improved 3 tube sprayer and enough Shoo-Fly to protect 200 cows for one day.

The original Shoo-Fly has been manufactured for twenty-two years and becomes more widely known every day. Its makers will send their free booklet containing the experience of many users to any reader of this

paper who will write for it. Write to the Shoo-Fly Manufacturing Company, 1311 North 10th Street, Philadelphia.



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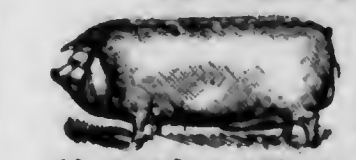
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P. F. HAMILTON, Cockeysville, Pa.

WILLIAM LOUDEN.

William Louden, of Fairfield, Iowa, was selected by Governor Cummins of that State as one of the three men to represent the State of Iowa in the conference called by President Roosevelt, to discuss the conservation of the national resources of the country. Mr. Louden was formerly a farmer, but is now the head of the Loudon Machinery Company, of Fairfield, Iowa. He is one of the members of the committee of three of the Iowa Manufacturers' Association on Industrial Education. He has given this subject extensive study—an author of considerable note, intensely interested in the matters which were the chief consideration of the conference at Washington.

As a successful farmer and manufacturer, Mr. Louden is interested in all that pertains to the agricultural resources of the country. He is an enthusiastic friend of agriculture and industrial schools, and believes they should be of vital interest to farmers.

In an address delivered at the Iowa Manufacturers' meeting at Council Bluffs, Mr. Louden said:

"It is a well recognized fact that a special education is essential in every branch of human endeavor. If a young man wishes to be a lawyer, he should go to law school; if a doctor, to a medical college; if a preacher, to a theological seminary, and so on. A rudimentary education is necessary for all and has been provided for by our public school system. After that, whatever additional branches may be taken up by the few who have the time and the money to spare, there should be provided for the many a practical education, which will properly fit them for the active duties of life. In this government the majority is supposed to rule, hence the importance of educating the masses. It is not possible, however, for everyone to learn everything. Life is too short and the average capacity and endurance is not sufficient for that. Therefore, a selection in the after studies to be perused has to be made. In my opinion, after the rudiments have been mastered, the studies should be arranged mainly with a view to the avocation which the pupil is to follow, which should, as nearly as practical, be in line with his natural inclination.

"There is probably not more than one-tenth of the people engaged in what is known as the 'Learned Professions,' but to make a conservative estimate and including persons of leisure, I will call it one-fourth. This leaves three-fourths of the entire population engaged in the business of agriculture, mechanic arts, housekeeping and kindred occupations. If those engaged in these occupations are to have as good educations in their respective lines as those engaged in the professions, you can readily see what will be required. The general idea appears to be that persons engaged in these avocations do not need to be as well educated as those engaged in the professions; in other words that almost anyone can be a farmer, a mechanic, a cook, or a general housekeeper without any special preparatory training, or as one has put it, 'the ordinary requirements in this class of work can be easily learned as needed.' This is an utterly mistaken idea. We have to live these things every day and hour of our lives and

unless we can get them right everything else will be more or less distorted and wrong.

"Fifty years ago probably no one had ever heard of tuberculosis in cattle, but now it is one of the burning questions. Since the passage of the pure food law and the rigid government inspection of meats, the packers have been losing many thousands of dollars by the rejection of carcasses which are affected with tuberculosis. In addition to tuberculosis in beef, there is to be considered also the question of tuberculosis in milk, butter and cheese, which makes it one of the far-reaching questions of the day.

"These are only a few of the problems which confront the modern farmer and there are more to come. How is he going to meet and solve these problems? A reliable understanding of the conditions involved and a practical knowledge of how to overcome the difficulties encountered will alone avail. Nature's laws are irrevocable and are never set aside by any one. 'Know How' is the only passport, and no one can enter without it.

"One of the most distressing signs of the times is the spirit of pessimism and distrust, too prevalent among farmers and laboring men. Some of them seem to think everyone's hand is raised against them, and that all have conspired to beat them. This is a sure sign of a lack of education. Nothing can be done in this spirit, for one optimist will accomplish more than ten pessimists and will rule them every time. We should look at the dark side of the question for one purpose only, and that is to devise means to better it. It is necessary to look at it for this purpose, and this alone. When the great agricultural, manufacturing and housekeeping masses get together in earnest, and with an intelligent purpose to improve their condition, they will receive the hearty co-operation and assistance of the learned professions, because what is good for one is good for all.

"Agricultural colleges are a rather recent innovation. Fifty years ago the first one in this country was established at Lansing, Michigan, and one week ago its semi-centennial was celebrated in that city, and was considered an event worthy of the presence of President Roosevelt, who made an address which should be read and studied by all. A friend of mine recently said, 'Of all the money the State spends, there is none which begins to yield the returns of that spent for its agricultural college.'

"It is impossible to estimate the work that has been done by colleges—the light that has been shed by them on the important matters in charge. We only know that it has been great, but great as it has been it is but little more than a drop in the bucket to what is needed.

"I have also heard it said that agricultural colleges are too expensive in their operation to be of benefit to the ordinary farmer. If this is so, it is simply a matter of administration, which can easily be corrected in the proper way. It cannot affect the principles at stake."

A very valuable book, "Some Interesting Facts on a Homely Subject," has been prepared by Mr. Louden, which ought to be of interest to every farmer. Our readers can obtain a copy of this book by addressing Mr. Wm. Louden, Fairfield, Iowa.

BLOODED STOCK for June—1908.

MUST HAVE SILO.

Mr. Jesse Williams, Excelsior Springs, Clay county, Mo., has used a silo two seasons. He feeds silage to milk cows, horses, calves and chickens, and says, "Last year I fed from 35 to 60 head of cattle out of the silo from October 7 to 15. When the silage ran out it took 400 pounds of bran per day to take its place."

Mr. Thomas Shields, Eureka, St. Louis county, Mo., has used a silo two years, fills it with corn sorghum and cowpeas, feeds to dairy cows and heifers and says, "As to cost of filling, my farm is not sufficient large to pasture my herd and raise sufficient feed to fill silos, so I have to depend on renting land anywhere I can get it. Some of the corn was hauled three and one-half miles this last season. While I could not give the practical cost, I will say I was well paid for the hauling. My silo was filled as follows: Three feet corn, then four feet cowpeas, then eight sorghum and finished filling with corn. My dairy herd gave best results with corn. I had intended filling one load of each, but fields were so far apart and labor so scarce I could not do so."

Mr. J. E. Roberts, Bolckow, Andrew county, Mo., has used a silo one year, filled it with corn, fed to dairy cows with "excellent" results. He says, "I think a silo a necessity to any farmer who has stock. I am satisfied with the increase of production of milk and cream has paid for my silo this year. My cows have milked the past winter just like they were on grass."

Mr. Robert E. Mitchell, Woodlandville, Boone county, Missouri, built a concrete silo a year ago, filled with

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BLOODED STOCK for June—1908.

corn, feeds to cows, steers and young cattle and says: "I can safely say that it has saved me somewhere from 25 to 50 per cent on my feed bill (probably one-third this past winter), and the physical effect on the cattle would be very hard to estimate, but it has been very satisfactory. I think anyone wintering as many as 20 or 25 cattle, either milk cows or steers, would be compensated for building a silo."

Mr. Philander P. Lewis, Crescent, says: "Silage is the cheapest dairy feed we have. It increases the milk and improves the conditions of the cows. I would not try to run a dairy without it." I have found that silage is not only a cheap and splendid feed for cows, but that horses, hogs and chickens do better from having it. I believe that every farmer who is feeding cows, horses, hogs, etc., would find a silo a profitable investment."

Mr. William H. Bruns, Concordia, Lafayette county, Mo., has a silo, used five years. He fills his silo with "corn and cowpeas, grown together, planted together, drilled all at one time." He says, "Corn and cowpeas make a silage that the cows like better than anything else I ever fed to them." Just think of how much more feed the corn crop will make, if the whole crop is eaten by the stock, stalks and all.

Mr. William Plummer, Hale, Carroll county, feeds silage to dairy cows and calves and says: "Our cows milk fine all winter and come out in good order in the spring. I couldn't get along without my silo now."

Mr. Guy Ensign, Cameron, Clinton County, says: "Our cows milk on silage about the same as on grass. Calves grow fine on it," and adds: "We started in last winter with more stock than we had carried through for some time, and on account of the dry weather we had less feed than usually, and we have got feed, hay and roughage to carry over. Ensilage seems to be a very healthy food. For instance, we had a horse that always stayed poor and not in good spirits till we started to feed him silage, and from that time he began to pick up. I think a man who owns a farm and keeps either milk cows or who is growing young stock, cannot afford to get along without one. It seems to keep cattle healthy."

ANNUAL JERSEY MEETING.

The Fortieth Annual Meeting of the American Jersey Cattle Club was held at the Hoffman House, New York City, May 6th. The attendance from a distance was good. President Darling set forth many important points in his address. In part he said: "During the past year the amount of business transacted by the Club has surpassed all previous records. In the number of animals registered, and of official tests completed and started, it has been a record year. In my last report the increase in registration was given as 1,130 animals over the year previous. At this meeting I have to report an increase of 1,273 animals registered over and above the figures for 1906-7. A notable and unusual feature of this increase is that 655 of the number are bulls and but 617 are cows."

During the last year 436 animals were imported while for the preceding year only 207 were brought over. There was an increase of 1,434 in the

number of transfers recorded. Eight new members were added to the Club, making a total present membership of 435. The number of animals registered up to April 30th is 80,027 bulls and 215,716 cows, making a total of 295,743.

The Club expressed its willingness to co-operate with the proposed National Dairy Register of Merit as outlined by the representative of the Associations of Breeders of Dairy Cattle and others, at the conference in Chicago, October 14, 1907. Geo. W. Sisson, Jr., represents the Club in this work. In speaking of it, Mr. Sisson said:

"I attended a conference at the National Dairy Show at Chicago October 15th, which was participated in by all the dairy breeds (except the Holsteins, who were not present, through some oversight) as well as by a dairy representative from Canada. A free and full discussion took place and a set of rules were adopted that were acceptable to all breeds including the Holsteins. Our own rules for the Register of Merit were the basis on which new rules were founded, which I consider a great compliment to the Club. The rules, as promulgated, have been adopted at the annual meeting of the Ayrshire Breeders' Association; we will act on it today; probably the Guernseys will act favorably on it at their meeting next week, as I hope the Holsteins will at their meeting in June."

Mr. Darling was re-elected President. This is the 15th successive term that he has filled this highest office of the Club. C. I. Hood, Geo. W. Sisson, Jr., F. W. Ayer, and S. N. Warren were elected as directors of the Club. J. P. Hutchinson was re-elected treasurer. J. J. Hemingway succeeds himself as secretary.

USE OF HEAVY AND LIGHT
SEED AND CULTIVATION OF
SMALL GRAINS.

The Nebraska Experiment Station has just issued Bulletin 104 giving the result of seven years' experiments with the cultivation of small grains, eight years' experiments with the use of heavy and light seed wheat, and three years' experiments with the use of heavy and light seed oats. Where drilled oats had been cultivated for seven years in comparison with uncultivated drilled oats, there has been an average increase in yields of 4.8 bushels per acre. The cultivation has consisted usually of one to three harrowings given about four to six weeks after sowing. Where oats is to be cultivated, it is found much better to drill it than to sow broadcast. For example, during four years drilled oats, both cultivated and uncultivated, was compared with broadcast oats. During the four years the drilled oats gave an average increase of 5.3 bushels per acre as the result of cultivation, while the broadcast oats actually decreased in yield 1.9 bushels per acre. This is probably due to the fact that in broadcast oats a large number of plants are either destroyed or injured by cultivation. The cultivation of winter wheat by the use of the harrow or weeder has not given increased yields. The greatest benefits of cultivation, especially with oats, have always been derived during dry years, while in seasons of more than normal rainfall, even with the oats, there has

sometimes been an actual decrease in yield from cultivation.

When the wheat was broadcast and cultivated an actual loss amounting to an average of three bushels per acre has resulted in the four years' experiment. Where the wheat was drilled, the loss amounted to only one-half bushel per acre.

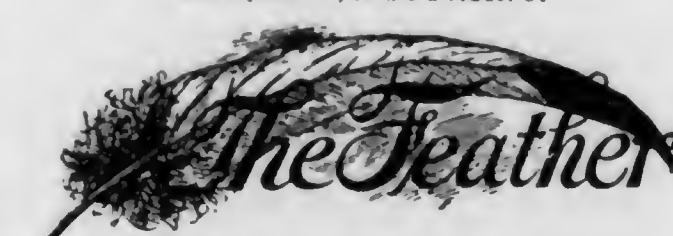
Quite astonishing results have been secured from rolling the winter wheat in the spring, an average increase for four years of 5.1 bushels being secured. The rolling was given soon after frost went out in the spring, and the benefit derived from rolling is believed to be due to the fact that the roller settles the earth firmly about the young wheat roots, causing them to stool and root much better.

For eight years experiments have been conducted comparing the use of heavy seed wheat separated by a fanning mill with light seed wheat and ordinary unseparated seed. The heavy seed has been the heaviest fourth of the crop each year and the light seed the lightest fourth. Two varieties, Turkish Red and Big Frame wheat, have been used in the experiment. There has been no average difference in yield or quality of the crop resulting from the use of heavy or light seed. Similar results have been secured for three years with Kherson oats. The data indicate that where seed wheat or oats has been reasonably cleaned in the threshing-machine no increased yield is to be expected from the further use of the fanning mill in separating the light and heavy grain, although there is an advantage in removing all foreign seed and also all straw and chaff which would prevent the seed from feeding unevenly through the drill. This seems to be due to the fact that there is no hereditary difference between the heavy and light grains, as both types come not only from the same plant but from the same head, and therefore it would be expected that the two kinds are likely to produce the same quality of grain. E. G. Montgomery.

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SECRETS OF GOOD DRIVING.

Mrs. John Gerken, one of the most famous women whips in America, has decided to devote her time in future to breeding fine horses at her country home on Long Island instead of exhibiting at horse shows. Her skill as a horsewoman may be judged from the fact that she recently won fifty-six blue ribbons in three consecutive weeks.

Mrs. Gerken has always bought and trained her own horses. She has driven ever since she was old enough to hold the lines. In speaking the other day about the principles of good horsemanship she said:

"A good horse is very difficult to find, especially a good saddle horse. The best and safest way is to buy a colt from one of the celebrated breeding farms. You can take a well-shaped four-year-old of good breed and teach him yourself, or have him taught the gaits and movements required. This is especially necessary if one desires a good saddle horse.

"Great care should be taken in the selection of a teacher, for if the colt's temper is spoiled by injudicious treatment he will be completely ruined. It is well in any event to superintend the colt's education and be sure that he is treated neither too indulgently nor cruelly.

"I study my horses—I study their temperaments, their dispositions, in order to control them. The same treatment is not adapted to all horses.

First of all I win their confidence and affection. I do not permit any one else to drive them, for the least thing will ruin a horse forever. It is very easy to get a horse in the habit of shying or balking or make him run away.

An impatient or cruel driver will frequently develop these habits in a horse, which are generally the result of nervousness and fear in the animal. There must be perfect harmony between the horse and his master. In that way only can he be made to do his utmost. If there is bad feeling between them he will become sulky and frequently vicious.

A horse is an extremely sensitive animal, almost more so than an ordinary mortal. He seems in a way gifted with divine instinct. If his driver is nervous it is at once conveyed to him, if his driver is ill-tempered or unsympathetic he catches the spirit.

"The horse has superior strength, but the man has superior intellect, and by intellect man must conquer brute force. Superior brute force can never be vanquished by harshness or cruel measures, but only by diplomacy and gentle firmness.

Ideas concerning the education of a horse have completely changed within the last twenty-five years. The whip as a means of punishment is entirely dispensed with in the best training schools of the present day, and instead of rough and brutal measures, kindness, firmness, and great patience are the means employed.

Aside from the fact that the thoroughbred is a better stepper and more beautifully formed than the horse of common breed, there is the greatest difference in their temperament and dispositions. I have generally found that well-bred horses if kindly treated are less likely to kick and give trouble in harness than underbred horses, and the difference is manifest in the

shape of the head and appearance.

In the thoroughbred there is greater width between the eyes, the brow is high and prominent and the expression of the face high-bred and intelligent. The head of the common breed shows a stupid aspect and small brain.

The one horse will be quick to comprehend what is required of him and will appreciate any effort made in his behalf to brighten and educate him, while the other will be slow to understand, almost indifferent to the kindness of his master and apt when too much indulged to return treachery for good treatment.

Attempt to abuse or use the whip upon the former, and you will arouse all the temper derived from his ancestors. In the contest which ensues between his master and himself he will win or terminate the strife by his own death. Apply the whip to the common horse; it will generally keep him in order.

The eyes are an important feature in judging a well-bred horse. They are large and bright and clear with a suppressed fire and energy. If small and set close together no matter what splendid qualities he may have, he is sure to possess some taint of inferior blood.

The mouth of the thoroughbred is large, amiable in expression and strong. The ears are also significant, being small, thin and delicate, with the tips inclining toward one another.

You may judge a fine horse by the width and expansion of his nostrils, which traits in an animal usually denote an active, alert temperament. Upon the least excitement the nostrils expand and quiver. The legs and feet of thoroughbreds are delicate and well shaped.

Having selected a young horse or four-year-old with the qualifications just mentioned, if a thoroughbred, and if not a thoroughbred one that possesses these qualifications just mentioned as nearly as possible, the training should begin. Infinite tact and patience are required and he should never be touched with a whip.

I have known good trainers to spend hours in getting a horse out of the sulks. Sometimes a sulky horse may possess such fine qualities that he is well worth the time and patience expended upon him. In controlling horses one must never forget that, like people, they differ in character and disposition.

Exercise is very important. If you want to keep your horse in fine condition he should be exercised regularly every day, according to his temperament, condition, and age, and always, if possible, the same distance daily. Every horse should get at least an exercise daily of about four or five miles.

On account of the regular systematic work and feeding, the horses hitched to a coach that goes a certain distance daily will look firmer and in better condition than those of a private individual.

It is particularly necessary in buying a saddle horse to select one as near your own temperament as possible. If you are high-spirited and sympathetic select a wide-awake animal, one that can be controlled by kindness and affection. One can easily discover if there is sympathy between the animal and one's self.

The theory of modern training is

BLOODED STOCK for June—1908.

that harshness only creates in the animal rebellion. It makes him headstrong, balky, and unreliable. He may yield to the whip today only to battle more fiercely another time, and his master can never be certain of him. Conquer your horse, but never depend upon force.

If he balks or is stubborn, wait patiently until he is ready to go, then gently force him to stand for as long again. When you start, make him move in the opposite direction from the one he chooses and walk him for a couple of miles.

"This kind of punishment is far more effective than the whip, he will learn who is master. Talk to him; he will understand you nine times out of ten.

Never fail to examine a horse's mouth. A hard-mouthed animal is a very unpleasant one for a lady to handle and generally degenerate into a runaway. Scars at the angles of the mouth are good indications of a runaway or bolter, or at least of cruel treatment, which is by no means a good instructor.

If comparatively young and if he has not had the advantages of good training, a horse of good breed may be educated out of bad habits. He may have many bad habits and still be made a good horse if those habits have not become permanent. A runaway, however, is an exception. Once a horse learns his superior strength it is hard to make him forget it.

A beginner should learn to drive one horse first and how to handle the reins. Elbows should be rather close to the body; squaring the elbows is not only bad form but causes loss of power.

One should be seated not high or low but firmly when driving.

Good driving consists mainly of an intelligent play upon the bit. If you saw a tender-mouthed horse and pull

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BLOODED STOCK for June—1908.

too hard you anger and annoy him. You must feel your way in driving a horse—give and take as it were.

The most difficult part of driving is to learn to handle the whip, especially to use it in driving tandems and four-in-hands. Be sure it is not too long and hold it well in hand.

Tandem is the most difficult mode of driving of any yet conceived, as the leader has it in his power to do entirely as he pleases, and he must, therefore, be selected with care. Then, again, if the wheeler shows temper it is merely a question of time when he will demoralize the leader and then the team will be dangerous.

The two leads in a four-in-hand balance each other, but a tandem leader has nothing but his reins to balance him when the traces are slack. Great care is necessary in training or breaking in horses for tandem work. I prefer ponies, as I think they are quicker and better suited for the tandem. Much care is necessary also to have the cart of proper weight and balance.

In driving one should wear good strong boots, otherwise the foot pushing against the dash board, which is necessary in controlling a spirited horse, will tire one.

Gloves, too, should be a size at least larger than is worn for shopping, in order to handle the reins successfully and control the animal. It stands to reason that if the hands are cramped in the least it lessens one's power."

—New York Sun.

TESTING COWS ON THE FARM.

Farmers, who have never kept any records of their herds, will naturally ask, "Does it pay to go to the trouble of weighing and testing each cow's milk?" A person, who is accustomed to doing this kind of work, can do it very quickly, but the man, who has never been trained to use the scales, takes samples and record the amount of milk given by each cow, finds, in the beginning, that the work is somewhat slow and tedious. If he will continue for awhile doing this sort of work, he will find that the knowledge gained about each one of his cows will many times repay for the trouble it takes to get a record of each one.

There is this to be said about this work: There are certain seasons on the farm when the work is very rushing and it seems about impossible to do any more. The time for weighing and sampling comes and it is put off for a few days and again put off until the interest in this work is lost. Any one who has done farm work, knows how easy it is to neglect things that do not have to be done and how hard it is to follow this sort of work regularly and symmetrically. Most men realize the value of this work, but somehow, not many can bring themselves to doing it.

We know of one herd of cows whose production of butter in three years was raised from 225 lbs. to 336 lbs. of butter per cow, by keeping a systematic record. Here is an increase of 111 lbs. of butter per cow per year, which is worth, at present prices of butter, more than \$25. With a herd of 20 cows, it means an increase of over \$500. Did it pay this farmer to spend a dollar a cow to have this work done? For every dollar spent in obtaining a record he received \$20 in return, and he had the

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The Chicago Horse Sale Company claim the dates November 15th to 21st for their 25th and regular fall sale. This enterprising firm are contemplating a horse show, either preceding or immediately following the sale, at which the entrants, either coach or carriage horses, saddlers, etc., must all be American-bred horses from recognized trotting families, the object being to demonstrate the superiority of the American trotting-bred horse in all the different uses of the light harness horse.

Thinks He Can Afford a Goat.

The editor of the Times attended a Jersey cattle sale Tuesday. It was his intention to buy a bull or two, a few cows, and a lot of heifers.

He saw an aged bull sell for \$5,000 and a yearling for \$1,500. He didn't purchase a bull.

He saw a cow sell for \$2,600. He decided not to buy a cow.

He saw one heifer sell for \$1,650, and weanlings change hands at \$400. He concluded not to invest in heifers.

He is now in the market for a kind, gentle, unpedigreed goat. —Glasgow (Ky) Times.

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Stock for Sale

Wm. R. MORRISON,

Oxford, Pa.



Chicago, Union Stock Yards, June 1.—Buyers have made a wide spread between the plainer and choice grades of native beef steers. This applies equally as true to similar classes of beef grades of she stock. And the widening process is by no means at an end. The run of grass cattle from the Southwest has only just started, and as they gain in numbers the buyers will discriminate more sharply against the offerings from the farms that have to compete with them. Thus it is only natural to expect the price range for plain to fairly good natives to seek still lower price levels. However, it is not thought the decline in values for choicer lots of corn-fed cattle will be proportionately as marked, as the fewer of such kinds back in the feed lots should enable sellers to hold these on a relatively good basis. The remarkable height to which the price of corn has been elevated will doubtless encourage liquidation by feeders who intended to hold back their cattle longer. Every load marketed now means that much less later this summer, which, along with the fact that the movement of unfinished steers countryward in late months has been greatly reduced, should mean a shortage of finished corn-fed offerings all along this summer from the big cattle-feeding states both this and the other side of the Mississippi River.

Hog Growers Resist Buyers.

Growers of hogs are being forced to stoutly resist the slaughterers in their bearish attacks on the market. When prices are leveled to where it necessitates marking the front figure with a four instead of a five in the country, producers promptly refused to sell their offerings. Hence the curtailed runs and an uplifting of the price range. Whether the growers will continue to feed a sinking market liberally remains to be seen. Prevailing conditions do not warrant the belief they will. The upward trend of the market for corn, combined with the emptying of feed lots can hardly result in other than increased runs of immature hogs, should prices for the stock on hoof fail to make material advances. The latter is surely not very probable in face of the bearishness of buyers and the restricted outlet for pork products. Of course, if the run of swine should continue liberal all through the summer the crop of good breeding stock in the corn belt will be heavily taxed, and then will come the shortage of hogs. If this is brought about the man who

persistently stays with the hog breeding business during a period of depression will be glad he did so. He will be in at a time when the man who shipped indiscriminately will be without the material when prices are highly remunerative.

Spring Crop of Pigs.

Advices regarding the crop of pigs this spring vary considerably in spite of the unusually favorable climatic conditions. During the winter it was possible for brood sows to get an abundance of exercise, while all spring chances of saving pigs were quite good. Ordinarily this would mean an exceptionally big crop of young swine for the coming fall and winter months. It should be remembered, however, that owing to the low level of prices last winter brood sows were marketed in numbers that astonished old timers in the trade, and there was a proportionate decrease in the swine raising industry this spring. But the country is too large, and rearing of hogs has extended too far west to expect even a marked shortage of spring pigs, while the improved methods adopted by producers have enabled them to save thousands of the little mortgage lifters, where in previous years it was nothing unusual to see the percentage drop under the normal in most localities. Our advices from the chief markets would indicate that the spring crop of pigs is not as large as could have been expected had prices ruled more favorable last winter. Whole trainloads of brood sows were marketed at Chicago last winter, while our Kansas City house informs us that from that territory adjacent, Kansas and Nebraska, producers sent to market more than usual. While a large number of brood sows were marketed at South St. Joseph it is not believed that they were sent in numerous enough from Missouri localities to bring about a marked shortage of pigs. At South Omaha there was not enough difference in the percentage of brood sows received last winter as compared with the previous one, and a good crop of swine should be forthcoming from the country adjacent to that market this coming winter. Sioux City received around 15 per cent in excess of the normal, but, owing to almost unprecedented success in the farrowing of pigs, this will be minimized considerably. A big portion of the hogs marketed at South St. Paul last winter and this spring were sows, and it is estimated that farmers carried over only around 50 per cent of the usual

number of brood sows. The Mayville Farm and the Grandin Farm, the largest producers of hogs in North Dakota, have only around 25 brood sows each now, whereas last year they carried over 225 head each. There were probably twice as many brood sows marketed at East Buffalo last winter as usual. After summing up the situation as gleaned from the information received from our houses at practically all the leading markets, and from our vast correspondence with producers over the greater part of the hog-producing country, it must be admitted that the country east of the Mississippi River has a lighter pig crop than usual, and that it is normal west of the River.

Sheep Prospects Not Bright.

The end of the crop from the Centennial State is already in sight and shipments of grass sheep from Texas are now tapering off greatly, receipts of such not showing up as liberally as expected. There is hope for betterment in the market under reduced runs. Marketing should be greatly curtailed, and thus slaughterers will be given a chance to get rid of the big stocks they have on hand, accumulated from congested supplies. But chances for higher prices are quite slim as consumptive demand is at a very low ebb and liberal receipts of spring lambs will soon be forthcoming from the South to be followed later on by large runs from the North. Many who handled either sheep or lambs in the feed lot this year fared badly, especially feeders of lambs. It is not difficult to discover the prime causes for most of these losses. In the first place, feeders bid prices up for thin stock to record-breaking levels, and secondly, the price of feed moved up to heights never dreamed of by even the old-timers in the business. The fact of the matter is, prices for the fat stock have stood up remarkably well considering the bad conditions that have surrounded the market right along.

May's Live Stock Trade.

Marketing of 181,000 cattle here in May stood the smallest for that month since 1886, and compared with 249,000 in May, 1907. The top for the month was \$7.40 and bulk of trading was on a \$5.75@56.75 basis, a range not much different than the preceding month. The fact that over 47 per cent of the cattle received were shipped out, indicates the good demand on Eastern accounts, while the unusually light supplies shows that the supply of

corn-fed cattle in the country is far below normal.

Receipts of hogs in May totaled 602,000, or 44,000 less than the corresponding month of last year. Outlet through shipping channels was to the extent of 149,000, which was a sustaining factor and proved a bar against packers pounding the market as much as they had wished to. During the month prices in main ranged between \$5.40 and \$5.75, with the summit at \$5.90, made the first day of the month.

Under marketing of 275,000, or 15,000 more than in May, 1907, and poor demand from all sources, prices for sheep and lambs fell around \$1.00. The top for sheep was \$6.25 and the best lambs were secured at \$7.75.

During the last week in May the top for cattle was \$7.30 and bulk sales were at \$5.75@56.90. Beef grades of cows and heifers went largely at \$3.75@55.60 and most bulls at \$4.00@55.00. Veal calves sold mostly at \$5.25@55.75. Stockers and feeders in main made \$3.75@4.90. The best hogs were secured at \$5.60 and bulk of trading was at \$5.20@55.55. The summit for sheep was \$5.25 and \$4.25 @54.75 gathered in the bulk, while top lambs made \$6.70 and bulk sold at \$5.50@56.60.

THE MALE AN IMPORTANT FACTOR IN BRREDDING FOR EGGS.

In feeding to develop a heavy laying strain, we universally turn to the 200-egg hen. "Breed from the layers to produce layers," is certainly sound logic if the adage holds true that like produces like. But both of these axioms are only true to a certain extent. The offspring resembles the parents to a degree only, and there is a constant tendency to variation. We know if we mated Plymouth Rocks, the progeny will be Plymouth Rocks, but they may resemble either parent in minor points or internal qualities. Atavism is one of the most powerful factors in breeding and often upsets the breeders' calculations. Atavism as one of the most powerful factors in breeding and often upsets the breeder's calculations. Atavism is the law of reversion, or the influence of ancestors. This inheritance is not only of external character, but also of qualities such as temperament, flesh formation and productiveness.

The 200-egg hen, though necessary in order to breed a strain of 200-egg producers, may not have a single offspring that will lay 200 eggs in a year. At the same time she may beget males which when properly mated to even less productive hens, may produce the coveted 200-egg pullet. The life germ which determines the productiveness of the offspring comes from and is influenced by the reproductive organs of the parents. A male and female both with strong sexual organs will, in most cases, produce offspring with like powers.

In my opinion the male exerts a greater influence on the egg-producing powers of the offspring than the female. While this influence is exerted by both parents, it is a fact that the majority of the females mostly resemble the male parent both in temperament and external character, while the males resemble the female parent in a like degree. This is not always the case, but it is true in the

majority of cases. We find it largely so in the human family.

Then to produce heavy laying pullets we must have males at the head of our breeding pens that have the power of transmitting the egg-producing quality. That means a male with strong sexual organs, not merely an amorous male. He must be masculine in every way, and should have full-sized comb and wattles, be active and attentive to his mates, crow frequently and somewhat prolonged, be full of courage and the leader of the flock. It is not so easy to pick out a male that will transmit the laying quality as it is the hens, for these we can trap-nest. All males that come from heavy laying hens do not have this power. Good males are as scarce as 200-egg hens.—Commercial Poultry.

THE COST OF BUILDING A CREAMERY.

During the past few years there have been built in the United States several thousand creameries, many of which have been successful from the start, while others have failed after a few months' operation, and some were never even started.

An investigation of the creamery business in several States by the United States Department of Agriculture has shown that the cause of so many of the failures was due to lack of a sufficient number of cows, which should not be less than 400, and that others failed because of improper organization, in the case of co-operative creameries, and excessive cost of building and equipment. Many creameries have cost about twice their actual worth, and were not of the type suited to the locality in which they were built.

The cost of a building about 28 by 48 feet will vary from \$800 to \$1400, depending upon the locality, the construction, and the cost of material and labor. Such a building usually consists of a main work room, engine and boiler room (including space for refrigerator machine), coal room, refrigerator, store-room and office.

Machinery for a hand separator plant, consisting of 15-horse power boiler, 10-horse power engine, combination churn with a capacity of 600 pounds of butter, and other necessary apparatus, will cost approximately \$1,200. Machinery for a whole milk plant will cost about \$1,850. This equipment will handle from 1,000 to 1,200 pounds of butter per day. If a refrigerating machine is included the cost will be from \$600 to \$1,000 more.

The total cost of a creamery would therefore vary from \$2,000 for a simple hand separator plant without artificial refrigeration, where labor and material are cheap, to \$4,250 for a whole milk plant including artificial refrigeration and a higher cost of labor and material.

The Department of Agriculture is prepared to furnish information for the proper organization of creameries and cheese factories, and upon request will supply plan of organization, list of machinery and plan for creamery. Correspondence should be addressed to the Dairy Division, United States Department of Agriculture, Washington, D. C.

The September number will appear in new form. It will be profusely illustrated and brimfull of good things

CUTTING CLOVER FOR SEED.

Wait until seed is well matured before cutting. Many cut it too green, thus losing seed. Heads must be well browned, the seed rub out in the hand. I emphasize this point—let it get ripe. Select a dry day, cut it down, and after a few hours rake it in windrows. Or, if you have cut with a self rake machine, or dropper, place the bunches together, two or three in a place. If the weather be dry, in a few days take a four or five tined fork and turn clover carefully. Rain will not hurt it. Let it bleach and dry out, and turn occasionally. When dry and brittle, secure a machine and thresh out at once. Years ago I used to rick it up and cover with timothy hay or plank, but I believe it is better to leave in field and haul direct to machine, as it becomes tough in a rick. A. B. M.

The one-horse cultivator is the best thing that can be put into the corn after it is too large for two-horse work, providing you do not wait too long before using it. You can cultivate until the corn tassels out. But if you wait until the roots have grown across the rows, the best thing to do is to stay out of it.

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FOR SALE—Some fine Yorkshire Pigs—no better stock in U. S. Just imported—new blood. A. A. BRADLEY, Frewsbury, N. Y.

Prices right; Hogs right—**Large English Berkshire and Large Bone Poland-China Hogs**—Anything from 8 weeks to teated sows and boars ready for service. Write your wants. GUSS BRUNNER, - - Sunman, Ind.

REGISTERED Duroc Swine, Bred Sows \$13. Stock of all ages for sale. WM. HARSHEMAN, Thurmont, Md.

REGISTERED Duroc Jersey Hogs for sale at panic prices. Beautiful gilts bred to farrow this month and next. April pigs. Address ROBINSON BROS., Myers, Ky.

MISCELLANEOUS.

HORSES Going Blind, Barry Co. Iowa City, Ia. can cure.

WANTED—30 Dorset Ewes, young and good quality. State number and price. Address P. P. GHEEN, Willow Grove, Pa.

PLAN TO GROW YOUR OWN FEED.

It makes no difference how well a man may understand the care of milk and cream and the making of butter, he cannot make dairying a profitable business unless he studies how to feed so as to leave a wide margin between the cost of the cow's ration and the value of her products.

With a view to ascertaining "where he is at," the farmer who is engaged in dairying, if he buys feed stuffs in the market, should ask himself if he could not produce something much more cheaply on his own land, which would contain practically the same elements.

All dairymen who have studied the science of feeding, know that a given amount of protein is absolutely necessary, and therefore in some form or other supply it to their cows, and even the unscientific farmer has observed that bran is a very good food-stuff to increase the flow of milk if he is feeding corn fodder, millet or timothy hay, but it does not have any appreciable effect if his cow is getting clover. In the latter case a feed of corn nubbins or ground corn is what has the desired effect.

He has, or maybe has not, deduced from this, that bran and clover are similar as to the elements they contain, and one might be substituted for the other. By actual analysis bran has been found to contain 12.3 pounds of protein in a hundred weight and 37.1 pounds of carbohydrates. Compare this with the table below giving the per cent of these elements in the hay made from the principal legumes:

	Protein.	Carbohydrates.
Red clover.....	6.8	35.8
Alsike clover.....	8.4	42.5
Alfalfa	11.0	39.0
Cowpeas	10.8	38.6

Having made the comparison which these figures make possible, it is easy to decide whether it pays to buy bran to supplement the corn silage and fodder raised on the farm. Take the cost of a ton of bran; two tons of clover are more than its equal in feeding value. How many tons can you raise to the acre? If you answer "three," then an acre of clover is worth to you the price of one and one-half tons of bran, minus the work of cutting and putting up the hay.

Alsike clover compares more favorably with bran than does the red clover, but as its yield is never so great, an acre would grow an amount of hay of less value than that produced on an acre of common clover. Alfalfa ranks nearest the bran in feeding value, pound for pound, and as its yield is greater than the other legumes mentioned, it is easily seen that it is the most profitable to grow. Some experiment stations report yields of from five tons up per acre, and some growers have claimed as high as ten tons, which seems fabulous.

Cowpeas make a very fair comparison with bran and there is no question that two or three tons can easily be raised to the acre of the latter varieties at least, though we have no doubt that the more quickly growing sorts like the New Era and Whippoorwill would yield that amount of hay if the land is fairly fertile.

The question for the farmer dairyman to decide, then, is whether it pays to buy bran, when by growing

Tubular

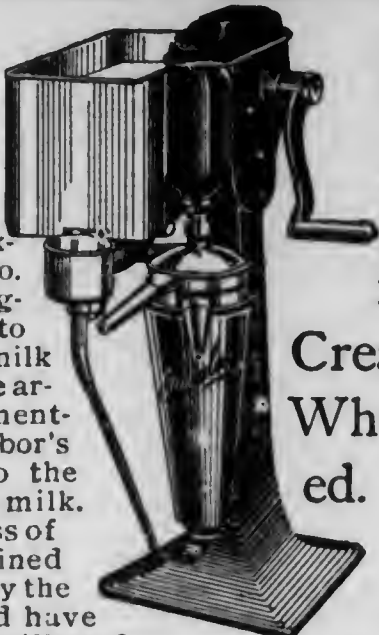
In February a certain man wished to try an experiment with a Tubular separator. He wanted to know by actual test exactly what the Tubular would do.

He had no cows so he arranged with a dairyman neighbor to make the experiment with the milk from the dairy of the latter. The arrangement was for the experimenter to skim the milk at the neighbor's dairy, and the cream to go to the creamery instead of the whole milk.

The dairy owner feared a loss of cream in this way, and so bargained that the experimenter was to pay the difference between what would have been obtained for the whole milk and the money actually received for the cream.

At the end of the month Mr. Dairyman was surprised to find that the cream had returned him \$30 more money than the factory would have allowed him for the whole milk.

Sequel—Next day the dairyman and two neighbor dairymen each bought a Tubular separator, and then hired a man out of employment to kick them



Gained

\$30 More

in a Month, for Cream Alone, than Whole Milk Yielded. Hauling and Time Losses Also Saved.

THE SHARPLES SEPARATOR COMPANY,

West Chester, Penna.

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leguminous plants the same elements may be furnished, and a high price be gotten out of the use of his land, while the soil will be left in better condition than before the crop was grown.

Now is the time to study this matter before planting season is past. Cowpeas will make a crop in ninety days and in the latitude of St. Louis, 30 degrees, they can be planted after wheat and make a crop before frost. Where clover will grow it is to be preferred, because it need not be planted every year, and alfalfa is even better for this reason, but the cowpeas can be relied on till a sufficient area has been sown to clover or alfalfa to supply the needs of the cows and other farm stock.—D. C. C. Cornman, in Farm and Stock.

THE COMMON SENSE HOG.

Secretary F. D. Coburn, of the Kansas Board of Agriculture, contributes an excellent article to the Kansas Farmer, under the above head. He says:

After all, swine breeders, with all their breeding and feeding, their study of types, families and pedigrees, should keep in mind the commonsense hog, that the practical everyday farmer, who cares more about types than breeds, and more about form than pedigree, needs, must have, and in the end will have. Fundamentally, the farmer, as a rule, does not care whether the hog wears red, white or black hair; whether its ears hang down, or stand up, whether it has swirls and cowlicks, or combs its hair straight. What he wants first is an animal with constitution; and any system of breeding, whether inbreeding or outbreeding, whether straight, crooked, or otherwise, that enfeebles the constitution is the kind of breeding the farmer does not want in his herd. To closely inbreed or linebreed merely for the development of some particular unimportant marking,

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when our patent sprayer is used. Keeps all insect pests off cows in pasture longer than any imitation. Used since 1885. Absolutely harmless, cures all sores. Halfcent's worth saves \$3 quarters milk and much flesh.

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Editor knows from experience that Shoo-Flies is O. K.



curl in the tail, or droop of ear, at the same time weakening the constitution or dwarfing the size, is to tread on dangerous ground.

The farmer does not care, either, for hogs "bred in the purple." He is not particular whether the great grandsire of his stock sold for one, three, or five thousand dollars. His chief interest is in this: What breed or type of hogs, for the care and feed it is practicable for me in my situation to give them, will yield the largest return in pork and money? He is furthermore interested in having hogs as nearly immune from disease as possible, and to this end he wants those with vigorous constitutions; pigs that will fight each other for the best before they are a day old, even if doing so leads to the vice of stealing later. He does not hold his pigs amenable to the code of morals enunciated in the sermon on the Mount. The commonsense hog must be a greedy fellow, and more or less of a hustler on occasion. He must not be an animated lard keg, a gob of fat, nor a fastidious loafer, to be fed on dainties. He must not be delicate or a mincing eater, but growthy, vigorous, healthy, and as good a looker as possible consistent with the sterling swine virtues mentioned. Breeders of any breed can produce this type if they will.



50 cts A YEAR
3 YEARS for \$1.00



BLOODED STOCK




Rose-Comb Rhode Island Reds owned by William R. Morrison, Oxford, Pa.

Vol. XIV JULY 1908 No. 5

COMING CATTLE CONDITIONS.

Seeing clearly, indicated by increasing prices of cattle and the shortage that must increase from this on by reason of the narrowing cattle ranching on the public lands, James B. Haggin, of the noted Elmdorf farm, near Lexington, Kentucky, has determined to sell his fine horses, said to be worth a million dollars, and turn his big farm into growing fine cattle for breeding purposes. The outlook in cattle growing was never more reassuring than it is now. The days of large ranches on the public lands are about at an end, and the public lands are about at an end, and the great numbers from that source of production to supply a growing demand must come from the agricultural States. It has come to be well understood that our valuable lands cannot afford to grow any but the very best cattle, and so the breeders of the best will find a growing market for this class for breeding purposes. No one can afford to grow a common beef animal on \$100 per acre land that will sell for only \$50 to \$60, when he can with the same feed grow such as will sell for \$90 to \$100 per head. These are the plain facts of the markets as to the comparative selling prices of common and high grade beef cattle. It is only by using pure bred sires on our best grade dams that we can attain to growing these high priced cattle. And so far-seeing breeders are shaping their affairs to meet this condition.

A correspondent from the ranch regions of the Southwest writes as follows to the Indiana Farmer:

"Settlers going and cattle coming out. Cattle are being shipped off the range in trainloads, while settlers are literally going in in trainloads."

And so it is, that cattle growing on the public land ranches is rapidly diminishing, and the corn belt will have to increase the cattle breeding to supply the demand. Touching this matter Secretary Brown of the American Cattle Breeders' Association says:

"The meat supply of the future is not to be produced on a few ranches, but on many small farms, and on these high-priced farms only the beef can be produced economically. Dairymen are using better dairy cows and our beef-producing farmer must fall in line with better cows of the beef breeds and use pure-bred bulls only. While looking to an extension of our pure-bred business into new fields, let us remember that our greatest field for extension must be among our neighbors on the farms. The relation of the breeder of pure-breds for breeding purposes to the breeder of grades for market must become closer and closer as time goes by. Between dairying and beef production the average farmer favors the latter, especially while there is a scarcity of labor. Live stock is, and always will be, the basis of our agricultural wealth. During the recent financial depression live stock values depreciated less than the products of nearly every other line of industry. There was never a more propitious time to embark in the pure-bred business or to push your particular breed than at the present time."

The following quotations from the Chicago market since January last shows the growing demand for beef cattle:

Week ending—	Top	Bulk
January 11.....	6.35	4.85@5.75
January 18.....	6.30	4.75@5.90
January 25.....	6.40	4.75@5.80
February 1.....	6.25	4.75@5.85
February 8.....	6.10	4.85@5.90
February 15.....	6.00	4.85@5.85
February 22.....	6.15	4.85@5.75
February 29.....	5.95	4.90@5.75
March 7.....	6.25	4.80@5.85
March 14.....	6.35	5.25@6.00
March 21.....	6.35	5.40@6.30
March 28.....	7.35	5.75@7.00
April 4.....	7.50	5.90@7.10
April 11.....	7.25	5.75@6.90
April 18.....	7.20	5.65@6.80
April 25.....	7.25	5.75@6.90
May 2.....	7.25	5.75@6.85
May 9.....	7.30	5.90@7.00
May 16.....	7.40	6.00@7.10
May 23.....	7.25	5.60@6.65
May 30.....	7.30	5.60@6.60
June 6.....	7.75	6.50@7.40
June 13.....	7.85	6.75@7.50
June 20.....	7.85	6.85@7.60

A HOG CHOLERA SPECIALIST.

Dr. J. H. Snoddy, the originator of the Snoddy Remedy and president of The Dr. J. H. Snoddy Remedy Co., of Alton, Ill., has proven an efficient hog cholera specialist. He has educated several other men in his methods of treating hog cholera and they are all kept busy visiting and treating the diseased herds of the country. They have cured in the last two months some of the most noted herds of the whole country. It is a fact they are sure curing the disease, because they go into some of the herds that are sick and dying every day and stop the disease in short order, curing such sick hogs as are able to take their treatment, and seldom lose a hog that can take the treatment.

Most of our prominent breeders can testify to these facts, among which is George W. Heckman, Mt. Sterling, Ill.; Thomas & Hogset, Golden, Ill.; R. L. Comer, Carlinville, Ill.; A. L. Lynch, Mt. Airy, Iowa, and J. B. Lynch, Independence, Md., who breeds the finest and highest types of

BLOODED STOCK for July—1908.

Duroc-Jerseys. There are many in all other breeds that have had the benefit of Dr. Snoddy's method of curing hog cholera, among which is Burgess Bros., Bement, Ill.; Goodrich Stock Farm Co., Eldon, Mo., and many others that we have not space to print.

All these men will testify that this remedy certainly cures hog cholera, because they have tried it, and many of them have used it for years and have cured their hogs more than one time.

The treatment is simple. Any practical farmer can use it successfully and can stop the worst outbreak of disease that comes, with the Snoddy Remedy if he uses it according to the plain, simple directions.

Snoddy's book on Hog Cholera is free to anyone who will write for it. It fully explains the whole principle of treatment. Every hog raiser should have one. Send your name and address to the Snoddy Remedy Co., Alton, Ill., and you will receive their free book by return mail.



Poultry-raisers have found that the better the incubators and brooders they use, the better the foods they feed, the more money they make, and the more pleasure they get out of their fowls. We want to supply you with the better incubators and brooders, foods and supplies. We manufacture and market the best goods in the world in our line. The "United" Incubators and brooders—standard the world over, and favorites with poultry people—are our leaders in the machine line. "Egg-ner" and "Fidelity" Foods need no argument to convince you of their merits. We manufacture and guarantee them. By buying all your supplies at one place you will save on freight, and will always get a quality you can depend on. Send us your orders and save money. Before you buy elsewhere write for our free catalogs. Do it today.

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PAIR OF FOUNDATION
HOLSTEINS \$100.00

Pontiac Calypso.

Bull born Feb. 27, 1908. Sire—Topsy Ormsby Prince, whose two nearest dams have official 7-day butter records averaging 26.9 lbs. each, their milk averaging 4.88 per cent. fat. Dam—Amarilla Maid Ormsby, with an official record of 378 lbs. milk, 11.85 lbs. butter in 7 days as a 2-year-old. Her dam, Amarilla's Maid, has an official record at 4½ years old, of 425.1 lbs. milk, 18.1 lbs. butter in 7 days; and the latter's dam, Amarilla (imported) has well verified records of 92 lbs. 5 oz milk in one day, and 20,132 lbs., 15 oz., in one year. This bull is a splendid animal, well developed, beautifully formed, handsome and attractive. We offer him to you with a heritage of equal quality and breeding, for the very low price of \$100.00. The pair are just what you want for foundation purposes. In establishing a herd, everything depends upon your foundation stock. Be sure to start right. The price named is for the two animals carefully crated, F. O. B. the cars, registered and transferred to you on the records of the H. F. Association.

This is a very special offer and cannot be repeated after our present stock is reduced.

THE STEVENS BROS.-HASTINGS COMPANY.
Brookside Herd. Liverpool, N. Y.

JULY

BLOODED STOCK

For Practical Stock Breeders and Feeders
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OUR PUBLICATION DAY is now the 15th of the month. To insure insertion of advts. as desired, all changes in running ads and new ads must reach us by the 1st of the month of issue.

OUR ADVERTISERS—We believe that every advertisement in this paper is backed by a responsible person. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts.

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On this page you will find our subscription offers for the season. You can save money by using some of these offers. We want your subscription at once. Please attend to it so that there will not be any delay. We do not intend to send our paper to those who do not want it, so we wish a prompt reply to this notice.

1. Fifty cents a year or three years for one dollar.
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3. Send three new subscribers, each for one year, and one dollar, and get Blooded Stock free for one year.

Clubbing offers will be found on another page.

BLOODED STOCK for July.

HORSE NOTES

WHEN THE EDUCATION of the colt should begin is a question that has several phases. One man will contend that he might as well try to teach a baby the multiplication table as teach a colt to pay attention to commands, but the cases are not the same. After a colt is three months old it is in full possession of its faculties, if such a word may be used in this connection, and is as teachable as a much older horse. The secret of success in training a colt, or, indeed, any other animal, is to try to teach only one thing at a time. Make the first lesson a thorough one, and above all things do not make the colt afraid of you. Keep its confidence, and whatever the lesson is keep at it until it is perfectly learned. The second lesson will be learned in a shorter time and the third in still shorter, and before long the colt will begin to comprehend that you want to teach it some new trick and it will try to help you out to the best of its ability, and in the end once or twice showing will be all that is needed in any lesson.

THERE IS A GREAT DIFFERENCE in the teachability of colts. One will pick up all sorts of tricks while another will never be able to get beyond the duties of a cart-horse; but a good cart-horse is a valuable animal, and sometimes the best-trained carriage-horse cannot fill its place. While it requires one sort of education to make a good riding- or driving-horse, it requires another to make a cart-horse, but as much pains should be taken with one as the other.

A COLT CAN BE RAISED as cheaply as a steer. A calf needs some grain the first winter, and the colt also requires some grain the first winter. After that he will winter on good hay just as well as the steer, and at four years old is worth more money than your four-year-old steer, or even at three years old they are worth more money. We speak of good ones, not scrubs. We think one reason that horses have been so low is that the farmers breed every plug mare, and to a good many cheap, plug horses. Let the farmers try to improve their stock, and we think the time will come when they will realize good prices.

IF A MAN WANTS A JOB not as easy as he may imagine in advance, let him go upon the streets of any town and try to buy a first-class family horse. He will find scores of them that owners or agents will swear by as being the best family horse ever wrapped in hide; but buy him, take him home and try him, and in ninety-nine cases out of a hundred he will prove to be wrong in some vital respect. Nothing but constant family use, with the most kindly and careful treatment, will ever make a family horse in the true acceptance of the term. A family horse must be not less than seven to eight years old, with several years of proper experience, possession of his entire confidence, and a good, sensible brain to start with. When any individual recommends a family horse as being absolutely reliable when it is less than seven years old, take the statement with a grain of salt and save your family from accidents and possibly death. A perfect family horse is cheaper at \$500 than an unsafe one as a gift. It is always a safe proposition in buying a family horse to test him for a week, to be driven by a well-posted, strong man, to save accidents.

USE COMMON SENSE and patience. The shortage of good horses is being felt more and more all over the country. Take care of your good colts and bring them up to the marketable age in good shape, and you will be well repaid for your trouble and care. The best-looking horse brings the most money.

THE VALUE OF THE HORSE is increased or lessened by his education or training. Many colts are ruined in "breaking." Many are never broken at all.

SUPERINTENDENT'S REPORT OF THE HOLSTEIN-FRIESIAN REGISTRY.

Mr. President and Members of the Holstein-Friesian Association:

I am glad to be able to state that the official year just closed has proved the most successful yet passed for the Advanced Registry work of this Association. The increase in the work over the year before was about 16 per cent, the total increase during the three years of my incumbency of this office being nearly 100 per cent. That is, the breeders of Holstein-Friesian cattle are doing practically twice as much official test work as they were doing three years ago. The proportion of breeders beginning this work during the past year has been greater than ever before; and the success with which they have met has so pleased them, that they are among the most enthusiastic supporters of the Advanced Registry system. Besides the satisfaction they gain by proving the capacity of their cows, they find that it pays from a money point of view; for even the owners of grade herds are now demanding advanced registry bred sires for the heading of their herds.

During the past official year our breeders have had 2,055 cows under test for periods of not less than seven days. Of these 2,055 cows whose records were reported, 47 began their records not less than eight months after calving; while 14 of them made semi-official yearly records. Of the 1,994 ordinary records reported, 72

were extended to 14 days, and 173 to 30 days. The averages of the 7 day records by ages were as follows:

Five hundred and eighty-three full aged cows averaged age, 7 years; days from calving, 23; milk, 463.5 lbs.; per cent. fat, 3.50; fat, 16.226 lbs. One hundred and thirty-six senior four-year-olds averaged age, 4 years, 10 months, 15 days; days from calving, 25; milk, 455.2 lbs.; per cent. fat, 3.46; fat, 15.746 lbs. One hundred sixty-five junior four-year-olds averaged age, 4 years, 3 months, 28 days; days from calving, 24; milk, 428.3 lbs.; per cent. fat, 3.48; fat, 14.884 lbs. One hundred and eighty senior three-year-olds averaged age, 3 years, 9 months, 4 days; days from calving, 25; milk, 397.1 lbs.; per cent. fat, 3.46; fat, 13.736 lbs. Two hundred and eleven junior three-year-olds averaged age, 3 years, 2 months, 18 days; days from calving, 30; milk, 383.2 lbs.; per cent. fat, 3.42; fat, 13.067 lbs. Two hundred and twenty-eight senior two-year-olds averaged age, 2 years, 9 months, 18 days; days from calving, 28; milk, 344.5 lbs.; per cent. fat, 3.26; fat, 11.243 lbs. Four hundred and ninety-one junior two-year-olds averaged age, 2 years, 1 month, 19 days; days from calving, 29; milk, 366.7 lbs.; per cent. fat, 3.43; fat, 10.516 lbs.

Considered as a single herd, these 1,994 animals of all ages, of which nearly one-half were heifers with first or second calves, produced in seven consecutive days 784,393.2 lbs. of milk containing 27,131.428 lbs. of butterfat; thus showing an average of 3.46 per

BLOODED STOCK for July—1908.

cent fat. Each animal produced an average of 393.3 lbs. of milk containing 13.607 lbs. of butterfat; equivalent to 56.2 lbs. or 27 quarts of milk per day, and 15% lbs. of the best commercial butter per week. Figures are sometimes tiresome; but the Advanced Registry office deals wholly in figures, and in no other way can we so effectually set forth the wonderful merits of our magnificent breed of dairy cattle.

The records for butterfat broken in the several classes during the year were not as many as for the preceding year; but a higher mark has been set for the junior four-year and junior three-year classes of the seven-day di-

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WAIST HIGH



BLOODED STOCK for July—1908.

vision, and for the junior two-year class of the eight months division. We entered the year with 8 cows in the list having records above 24 lbs. of butterfat in 7 days; and we close the year with 21 such cows in the list. We began the year with 6 cows having 30-day records in excess of 100 lbs. of butter-fat and we close it with 12. The average fat production for every class, but the senior three-year-old, has been raised, some of them very materially; while the average per cent fat for all animals, taken as a whole, has been raised from 3.42 to 3.46 per cent. The showing made is simply wonderful.

It has long been the custom of the Holstein-Friesian Association to doubly authenticate all specially large records by the use of the retest for a period of 24 to 48 hours. During the period of retest, the cow is kept under constant watch, day and night; two supervisors having her in charge, and each taking his turn in the oversight. During the year past, 72 of these retests were ordered, all on very large productions of fat.

As the average cost of a re-test is about \$6.00, the superintendent became much exercised in mind over the cost to the Association. He finally hit upon the plan of distributing a special report blank for supervisors to use in special cases. The supervisors have been prompt in the use of this blank in nearly all cases, enabling the superintendent to keep close watch from day to day of all large yields; and while the keeping in touch with so many supervisors, working in so many different states, has added much to the superintendent's work, the plan is most satisfactory all around, and enables him to cut down the number of retests by fully 25 per cent, without in any way impairing the re-test system.

Interest in semi-official test work is on the increase, although the number of such tests actually reported is less than last year. The great record of 998.26 lbs. of fat from 27,432.5 lbs. of milk, completed during the past year by Colantha 4th's Johanna, makes her the leading dairy cow of any and all breeds, and confers the honor upon the Holstein-Friesian breed of standing first and foremost, in all respects, among the dairy breeds. The plan of establishing a National Dairy Register of Merit will be laid before you today, and you will take such action as may seem best to you. I believe in, and have for many years been working in favor of adding the semi-official test to our present system; in order to fill out the lactation period with test work, and so establish a more perfect basis for the selection of breeding stock to be used in the improvement of the breed. But I am not an advocate of any such plan which would assume to be the only system for gauging the merits of dairy cattle, and by such assumption would discriminate against the value of official tests made under any other plan. Holstein-Friesian breeders have too much money invested in cattle tested under its present system to be able to afford to discredit that system in the slightest degree. Touch the system, even by implication, and you touch the purse of the owner of every Holstein-Friesian cow tested under that system.

In the nature of the case, there can be but one official test; and anything

partially official and partially private must be semi-official. Taken for just what it is, am, as I have already said, a strong advocate of the addition of the semi-official test to our present system, but I am opposed to the designation of such tests as official, and thus confusing the mind of the dairy public as to what an official test really is. Fully believing in its great value to our breeders, and in giving a greater degree of recognition to the semi-official test than we do now, I recommend to this meeting that it, by proper resolutions, recommend to the Annual Meeting of next year the appropriation of \$1,000 for the encouragement of such tests, and the authorization of its board of Officers to apportion that sum by classes as prize money in essentially the same way as the prize money for the 30-day and 'eight months' test is now apportioned. The amount suggested is not large but breeders making semi-official tests will also be in condition to make regular official 'eight months' tests; thus sharing in the prize-money and making a success of that form of test, which, as you see from my report, is now, as far as number of tests is concerned, very little short of an absolute failure.

In order to make the immense amount of data on file in the Advanced Registry office available to Holstein-Friesian breeders, at its actual cost to the Association for clerk-hire, and to aid in conserving the natural financial resources of the Association, I have, during the latter part of the past year, inaugurated a system of official pedigrees; and it is already evident that this form of pedigree, is-

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Your Profits Are Cut At FOUR Points by ABORTION

1. You Lose Calves, thus preventing a natural increase in your herd.
2. You Lose Milk, a direct money loss.
3. You Lose Cows, for an unprofitable cow must be disposed of, or she eats her head off, a loss in either case.
4. You Lose Time and Labor in caring for a diseased cow, besides running the risk of infecting the entire herd.

You can stop all this loss by stamping out the disease with Dr. David Roberts' Anti-Abortion Serum Treatment. You can administer the treatment yourself.

This is what Dr. A. S. Alexander, of the Wisconsin Experimental Station says in reply to an inquiry in regard to the Roberts' Treatment for Abortion: "I must confess that I cannot prescribe anything for contagious abortion that gives as good results as those obtained from the use of Dr. David Roberts' Anti-Abortion Serum, which to my knowledge has succeeded where thorough application of an anti-septic treatment advised by me had failed to stay or prevent the disease. His other remedies are also reliable and worthy of extended use by stockmen."

Your herd may be infected with abortion without showing positive symptoms. If there is a falling off in the flow of milk or in the quality. If your cows are run down or are out of condition, you ought to examine them and make tests for Abortion. Even if they are in apparent good condition, one or more of them may have the germs of contagious abortion in the system. It will cost you nothing to find out if your cows are affected, and the sooner you make the test the more you will save in time and money.

Ask for "The Practical Home Veterinarian." It tells all about abortion; how to detect it and how to stamp it out. It is FREE. This book is the published results of Dr. David Roberts' twenty years' experience and veterinary experience with the disease of Abortion. It is a \$1.00 cloth bound book. Cut out the coupon below and send it today with 10c post. age. If you send at once we will put you on the free list of "The Cattle Specialist," a monthly live stock journal.

A Positive Guarantee We guarantee to wipe out the germs of contagious Abortion in every case where Dr. Roberts' Anti-Abortion Serum is used as directed in "The Practical Home Veterinarian." In case of failure we return the cost of treatment.

A public recognition of Dr. Roberts' thoroughness and eminence as a veterinarian was his recent appointment as State Veterinarian of Wisconsin, one of the greatest dairy states. The fact that hundreds of herds have been successfully treated—not one unsuccessfully—tells why we can guarantee the treatment. Send the Free Book Coupon while you have it in mind. The book is a complete guide in treating all live stock diseases.

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sued by the Association through the Advanced Registry office, is destined to become very popular among our breeders, as well as the source of quite a revenue to the Association. Official data is also issued to such breeders as prefer to get out their own pedigrees. It has required nearly three years to get the Advanced Registry office in shape to be able to do such work. This work can be best done during the summer months; but it will be the endeavor to give prompt service at all times, except during the month of May.

The hardship of the Advanced Registry office consists in its being expected to receive, verify, accept, report, award prizes and make the division of prize-money so as to cover every certified report received up to the evening of May 15th of each year, and to have everything ready for the Annual Meeting a little over two weeks later. This can only be accomplished by careful systematizing every detail of the work in such a manner as, without disorganizing the system, will make it possible to lay aside portions of the work, to be taken up again and completed during the summer; also making it possible to complete the data for any one animal on short notice, so as to make such data available for any breeder or for official pedigree purposes. It is for this reason that you have not received Certificates of Advanced Registry as yet for the last 400 or more of animals accepted; and the office will not be fully caught up in all respects till some time in September.

To the close of the last official year, a total of 8,554 animals have been admitted to Advanced Registry as original entries, of which 579 were bulls. During the past year, 1,311 cows and 84 bulls have been admitted as original entries, while 744 cows and 66 bulls have been admitted to re-entry under the rules governing such entries. The total of entries for the year is 2,205, as against 1,965 reported by me one year ago, an increase of nearly 13 per cent. The receipts and expenses of this office for the past year are as follows:

Receipts.	
Balance on hand.....	\$ 205 65
Treasurer's draft.....	7889 08
Duplicate certificates.....	1 50
Official pedigrees.....	106 40
Total.....	\$8202 63

Expenses.	
Printing.....	\$3118 89
Clerk hire.....	1192 84
Office rent and sundries.....	300 00
Postage and telegraph.....	608 38
Retests, in number 72.....	424 81
Freight and express.....	54 51
Office furnishings.....	325 55
Office supplies.....	107 21
Supt's traveling expenses.....	83 23
Superintendent's salary.....	2000 00

Total.....\$8215 52
Due Supt. to balance..... 12 89

The growth of the office may be measured by the increase of 25 per cent in the postage and 50 per cent in the printing bills. During the year an edition of 8,000 copies of the Outlines of the Holstein-Friesian Registry System was printed, the State Agricultural Colleges taking 2,600 copies, and 5,000 copies being turned over to our Literary Bureau. Of the advance sheet of the official reports, 1,000 copies of each issue are now printed and

distributed; this mailing list steadily grows. The general correspondence of the office also grows proportionally and takes a large share of the Superintendent's time. The 18th Volume of the Advanced Register has been printed and delivered; and the copy of the 19th volume is nearly complete, the entries being in print. I will express the usual hope that the printers will make it possible to deliver the book earlier this year; and as it is being printed in Chicago, I think my hopes will be fulfilled.

Again, I desire to thank owners and the index and a small proportion of supervisors for their prompt reports in cases of large production; thus enabling me to order re-tests, when deemed desirable, promptly and without inconvenience to any one.

As prize money for records reported during the last official year, \$3,991 has been divided among about 80 breeders. Winners of even the smallest prizes may congratulate themselves on their success; for with such magnificent showing as our records make, it is a great honor to win any prize at all. In addition to this report, and as forming a part of the same, I also submit, in pamphlet form, a report of the official and semi-official butter-fat records made during the past year, and of the prize-winning cows in the several classes of the three prize divisions.

Respectfully submitted,
Malcolm H. Gardner,
Supt. of Adv. Reg.

MONEY ON SHEEP.

How the Ordinary Farmer Can Manage to Make It.

I think it will pay the farmer to have one hundred ewes. This is a nice little lot to take care of. He need not learn to know them all by name, but he can know them all by sight.

Do You Want a Happy Medium

I have the best of this strain to be found in the U. S. Have stock of all ages. Show animals and herd-headers. Write me your needs.

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About Your Poultry Read

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A postal addressed to the Reliable Poultry Journal, Box 35, Quincy, Illinois, brings a sample copy by return mail. If you inclose this ad. we will send you the Reliable to Aug., 1909, for 50 cents, commencing this month. No other poultry paper can give you this value.

BLOODED STOCK for July—1908.

I am not talking to you about the winter lamb business now; I am going to talk to you of how the ordinary farmer can manage to make money on sheep in Pennsylvania, says Joseph E. Wing, before the Pennsylvania Live Stock Breeders.

He should begin in February or March, and first I want to talk to you a little about taking care of the ewes in pregnancy. This is the thing most people know little about. I love to talk about it, because I have had

Cutaway Tools for Large Hay Crops

Clark's Reversible Bush and Hog Plow. Cuts a track 1 ft. wide, 1 ft. deep. Will plow a new cut forest. His double action Cutaway Harrow keeps land true. Moves 18 000 tons of earth. Cuts 30 cres per day.



Jointed pole takes all weight off horses and keeps their heels away from the disks.

A WONDERFUL INVENTION



Clark's Double Action Combined Cultivator and Harrow

can be used to cultivate rowed crops, as a listing harrow, also when closed together is a harrow cutting 4 1-2 feet wide.

CUTAWAY HARROW CO.,
6 Main Street, - Higganum, Conn.

BLOODED STOCK for July—1908.

so much experience with it. I had the benefit of that when I was a young man and had a young wife, and a nice lot of sheep, and I was as happy as I could be. I kept my sheep very carefully housed, and protected from the weather, and led them out to water, and took all the care of them that I knew how. I had read a good deal about the value of protein in the feed and bone meal, and of wheat bran and clover hay, and oats sometimes, and I never saw anything prettier than that bunch of sheep. But when the lambs came then the clouds came over my sun. Feeding so much protein had developed too much bone, and the lambs could hardly be born at all. I remember one weighing 17 pounds, but the mother died and the lamb died. I took it into the house and nursed it and fed it, but it died. The lamb died because I did not know how to feed. Well, an old man who had raised sheep for many years said to me: "You take too good care of your sheep; let them hustle, and give them oat straw. You have wasted your feed by giving them too much." So I gave them oat straw and a little corn fodder, and they looked fine and well rounded out, but there was something not quite right. You can learn to tell that in your sheep just as a man learns to know when his wife is mad. At first he needs a diagram to show him, but after awhile he learns it instinctively. Well, the lambs came, and they looked all right; there was nothing wrong to be seen, but they did not live. That ewe did not have that lamb at the psychological moment; there are forces at work in her beyond the care of man, and I learn then this wonderful thing, that if the ewe did not have milk in her udder, she did not love her lamb either. I have had an old ewe look at me, and then at the lamb, and say as plainly as if she could talk, "Joe, here is that lamb; I have no use for it; you had better take care of it." And I tried it many times, and have nursed those lambs and fed them, and tried my best to raise them, but rarely with success. And I learned this then, that if a ewe does not have milk in her udder she does not have any love in her heart, either, and these ewes did not have milk in their udders because they did not have these lambs at the psychological moment.

Then I thought that if I was careful to get a good sire, my lambs would be all right; so I exercised great care to get good sires. Then, one day I had a lamb born, and the moment it was born it looked around very lively and found its dinner and enjoyed it, and I said, "That lamb has strength, and it is going to live," but it died. Its father lived, and its mother lived, and all its kindred. It would take a special story to tell how too much strength is too good—how it is almost as bad as too little.

Now we have learned how the lambs should be born, and we will go back to our ewe. We keep that ewe carefully housed and protected from the wet weather, and we fed her up with alfalfa and bran, and yet none of those lambs will live. Why? She gets no exercise; she stands too much, and none of those lambs will live. Keep her out of doors, and give her exercise, and feed her well, but not too well, and see if those lambs will not live. Our sheep must not be

exposed to the weather, but they must not be kept too warm. I have a neighbor who has a barn worth \$3,000, and he has never raised a single sheep in it. He keeps it closed too tight, and his sheep get no air. You need the air.

A man who has sheep should have a lot of little panels made, about 3½ feet long, and fitted with two little doors to keep the lambs together. You can fold the panels up and put them away when you don't want them.

Never give the ewe any change in her feed, and no increase. It may cause a great many troubles, and give indigestion to give her anything different, but gradually decrease it while seeing that she still has enough to eat. It is a common mistake to give her some protein, and some wheat bran, and some alfalfa, thinking that will make milk.

If you think the lambs cannot suck all the milk out so as to get a fresh supply next time, it is wise to milk her for a few days until the lambs get bigger.

Now another thing: Make a place where the lambs can go in and the ewes cannot follow, and make it so that they can get in easier than out. The lamb is the creature of opportunity. Most men are like them, and some of you men will probably go to the legislature some day; and some will probably go to prison; it all depends upon the opportunity. So if the lamb has the opportunity to go into this place he will do so. Place in that pen a little trough, and in that trough some grain—wheat bran will do, or a little corn meal, very coarse ground, or about 1 per cent oil meal or buckwheat bran. It doesn't take long for these little fellows to get started eating the grain, and I tell you they enjoy it. Then comes the grass in the fields, and here is something I want to impress upon you: keep them off the grass when it is growing. When you turn them out of the pen, turn them into a little yard, and keep it bright and clean, and when you give them grass feed it to them on the ground. Why?

There is nothing in the grass but a little coloring matter, but until he gets something to do he does not need very much of it.

When you turn them out you may have some trouble about intestinal parasites. That time comes along about the middle of June. Then the ewes go out to grass with the lambs, and I tell you it is a pretty sight to see those lambs run up and down the fields and play and then run up to the ewe, and off again, as if asking her to watch them play.

Make a place in the field and spread a little corn meal there for them, and one of the best things you can give them is coarse salt that you buy, and then, of course, there is the mother's milk—the best of all for them.

If you would prove that lice are a direct source of loss to the farmer, pick out the poorest and most runty looking hog in the bunch and almost invariably you will find him to be the lousiest. This fact has given rise to the one idea that the lice prefer a hog thin in flesh. The more logical conclusion is that the hog is this because of the lice, the irritation they produce, added to the actual loss of blood having retarded its growth. If the presence of lice will make a hundred pounds shortage in the weight of one or two hogs in the drove it is reasonable to suppose that all the hogs will be more or less below their best productive power and something should be done.

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If you send names of 5 corn or stock growers and let for a year's trial to Farm & Stock, the only monthly devoted to corn and live stock. Regular rate \$1, but we make this offer to get list of wide awake growers. Farm & Stock, 805 Charles, St. Joseph, Mo.

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regardless of cost or profits, on all of my 125 styles GENUINE SPLIT HICKORY Bugles and Harness—Sold Direct from Factory on 30 Days Free Trial—Two Year Guarantee. Now is your chance to save many a dollar. Write for big Catalogue, Special Cut Price Sheet full of explaining the proposition. Everything goes in this sale. **OHIO CARRIAGE MFG. CO.** Columbus, Ohio

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It loads Potatoes, Grain, Stones, Etc.
It saves your back—cost low.
If you don't buy it you pay for it any how—in help.
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Simplex Wagon Loader Co., OXFORD, PA.

SOME MEANS OF DETECTING THE PRESENCE OF THE UN-PROFITABLE COW IN THE HERD.

Cow testing associations may be defined as voluntary associations of neighbors desiring through co-operative effort to detect unprofitable cows in their herds, says Prof. J. B. Lindsey, in Massachusetts Experiment Bulletin.

These associations are very common in Europe, and are being rapidly organized in several of the western states and in Canada. Experts are employed who make periodic visits to weigh the milk and test it for butterfat, and who are willing, when called upon, to offer advice and suggestions relative to the dairy herd.

The cost of doing the work, which includes traveling expenses, board and salary, in many cases is borne partly by the members of the association and partly by the state, and may amount to from \$2 to \$6 per cow yearly. The plan is perfectly feasible if well organized and if a sufficient number can be induced to become members. It is believed that ere long many such association will be organized in Massachusetts, and that they will be under the direction and receive help from the state.

The following plan is tentatively suggested whereby the average farmer can help himself and at a minimum outlay of time and money, ascertain the profitable cows in his herd.

Weighting: Begin when the cow is fresh and weigh her milk for three consecutive days in each month, preferably about the middle and record the weight on previously prepared ruled paper. (Blank forms for keeping complete monthly records can be had at dairy supply houses.) The sum of the amount produced for three days multiplied by 10 gives the amount produced for the month. The amount of milk produced in a portion of a month can be estimated by weighing the milk for one or two days and multiplying by the proper number. Continue the weighing for one year, and from year to year if you would know the whole truth. Preserve yearly summary in permanent record book.

The balance: Any balance or scale will do, but the Chatillon balance, with the scale graduated into pounds and tenths, and with a movable pointer so that when the empty pail is suspended, the pointer may be made to indicate zero, is to be preferred. The scales cost \$3 at any dairy supply house.

When to sample: Sample the milk of each cow in the second, fourth and seventh month after calving; any time during the month will do, but the middle is to be preferred. The average of the three tests will be a fair index of the quality of the milk during the milk period. Thus if the milk tests 3.8, 4.2 and 4.8 per cent fat, the average would be 4.27 per cent for the entire period.

Utensils needed in sampling: A pint lightning jar for each cow; a small coffee cup or long handled gill dipper for taking the sample; a box of bichromate of potash or B. and W. corrosive sublimate tablets for preserving the sample (a solution of formalin may be used in place of the tablets; it can be procured at any druggist. Add five drops with a

medicine dropper) to be procured of any dairy supply house at a cost of \$1 to \$1.25 per box.

How to sample: Powder fine with a knife one-half of a tablet and put in each jar. Milk the cow dry and pour the milk as carefully as possible from one pail to another three times in order to mix it. Do not allow any more frothing (air bubbles) than possible. Dip out a cupful of the milk at once and pour into the jar. Mix the milk with the preservative by a careful rotary motion. Do not shake or turn the jar upside down. Proceed in this manner for four consecutive milkings (two full days). Be sure to mix the milk by the rotary motion each time a sample is added to the jar and keep the jar tightly covered. The jar should be marked with the name and number of the cow.

The samples may be tested by the owner of the cow if he has a Babcock machine, glassware and acid, or it may be taken to the creamery, or in exceptional cases sent to the experiment station. Testing outfits with full instructions may be had of any dairy supply house, who furnish catalogs on application.

Month.	Illustration of year's Milk Product.	
	3 days yield.	30 days yield.
January	90 lbs.	900 lbs.
February	78	780
March	72	720
April	66	660
May	60	600
June	54	540
July	48	480
August	42	420
September	30	300
October	20	300
November	15	150
December	(dry)	

Total.....5750
Total 5,750 pounds milk x 4.27 (average per cent fat) equals 245.5 pounds butterfat.

Converting butterfat into butter (the pounds of butterfat by 1-6 (the 1-6 represents the water, ash and curd) thus: 1-6 of 245.5 pounds butterfat equals 40.9-1-245.5 equals 286.4 pounds butter produced during the year.

SUMMER COMFORTS.

Comfort in summer is as important to egg-production as comfort in winter, and in order to provide not luxuries, but necessities, for the hens, poultry houses and fowls should be inspected daily. The fowls must not be crowded and ventilation should be induced as much as possible without allowing a draught to flow over the birds at night. On very warm nights an open shed will answer.

The importance of having shade in the poultry yards should not be overlooked for birds of the larger breeds, and especially those that are very fat are easily overcome with apoplexy and the poultryman cannot afford to lose his hens when prevention would have saved the fowls.

Lice are the greatest obstacles in the way of the welfare of fowls. When warm weather sets in, poultry houses that are apparently free from lice are overrun with the pests and they multiply with astonishing rapidity. One single day during the heated term will be sufficient to show the presence of these enemies of the birds in such numbers that one will gaze in aston-

BLOODED STOCK for July—1908.

ishment at the number. Before the warm days arrive the houses must be thoroughly cleaned, sprayed with a lice exterminator and every crack and crevice overhauled.

Little food should be given the hens after they have the run of the fields and especially when the days are hot, for much food is conducive to upsetting their digestive organs, and if any food is given it must not be of the fattening kind, green food being preferable.

One means of great loss is in shipping the live fowls to market. Hundreds of coops arrive when the temperature is up to 90 and 100 with the fowls crowded so that they can hardly breathe, let alone move around. And how many are void of water in the coops! It is really astonishing to think that any human being would send a live bird to the market and not have a care for its comfort while on the way. Fowls have feelings and should not be allowed to suffer. There is always a loss from death when fowls are so shipped, not to mention the loss in weight of those that survive.

Treat the fowls as if they were your friends, which they surely are, and you will find that it will pay you in the long run, not only in dollars and cents but in the satisfaction of knowing that you appreciated their efforts to help you earn your living by making them comfortable while they are working for you.—Mirror and Farmer

In the dry years and in the wet years, live stock and dairying make a mighty good buffer that will help many a farmer to stand the hard knocks.

HOTEL RICHMOND
17th and H Streets
WASHINGTON, D. C.

100 Rooms, 50 Private Baths, American Plan \$3. Day, Upwards; with Bath \$1. Additional
European Plan, \$1.50 Per Day, Upwards; with Bath, \$1. Additional



A high-class hotel, conducted for your comfort. Remodeled, furnished through out. Directly on car line Union Station 20 minutes, Capitol, 20 minutes. Shops and Theatres, 10 minutes. Two blocks to White House and executive buildings. Opposite Metropolitan Club.

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Wayside Inn and Cottages. Lake Luzerne N. Y. in the Adirondacks. Switzerland of America. 45 minutes from Saratoga.
Send for Booklet

CLIFFORD M. LEWIS, PROP

BLOODED STOCK for July—1908.

HOG CHOLERA

The Hog Worm is the Most Dangerous Foe of the Hog

In almost every outbreak of cholera you will find hogs very wormy. They get a hog out of condition and unthrifty. Then it is an easy prey to disease. The Snoddy Remedy will destroy every character of a hog worm. Even the liver and lung worms, which are the most dangerous, are easily destroyed with the Snoddy Remedy. Ten cents worth of the Snoddy Remedy will clear out the worms and purify the blood of a hundred pound shoat, so that he will be worth one dollar or more in a few weeks than he would have gained without this remedy. Can't you afford to invest ten cents per head to make your shoats worth a dollar per head more than they will without this little investment. Then why waste time and feed on wormy, runty hogs when it is easy to have them thrifty.

It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

THE SNODDY REMEDY CO., Box 290, ALTON, ILL.

GROWING CATTLE IN WESTERN NEBRASKA.

"Growing Cattle in Western Nebraska" is the title of Bulletin No. 105 of the Nebraska Experiment Station. The bulletin gives the results of de-horning cattle and of feeding alfalfa, prairie hay, and cane, and combinations of these feeds to calves and to yearling steers. It also gives figures showing the gains made by steers during the winter and during the summer periods.

Experiment No. 1 gives the results of de-horning one-half of a herd of 150 two-year-old steers. These were weighed April 1, 1904. They were weighed again May 1st and ran in the Substation canyon pasture until December 1st, seven months. During the month of April they were kept in a pasture in the South Platte valley by the owner. All steers lost in weight because of lack of feed. Those dehorned lost eight pounds more per steer than those not dehorned. During the remainder of the summer they lacked thirteen pounds of gaining as much as those not dehorned. During the eight months after de-horning, there was a difference of twenty-one pounds in favor of those not dehorned. The difference in price of de-horned steers for feeders still made de-horning profitable.

Experiment No. 2 gives the results of wintering 100 steer calves in five lots of 20 steers each on the three main forage crops of western Nebraska, viz.: alfalfa, prairie hay and cane (or sorghum hay), with two pounds of grain per calf daily. The results show that during the four months of the experiment alfalfa produced twice as large gains as prairie hay and three times as large gains as cane, but that a ration of one-half alfalfa and one-half cane, gave almost as large gains as alfalfa alone. The cheaper gains came from alfalfa and from alfalfa with prairie hay or cane.

Experiment No. 3 gives the results of a similar test with the same steers as yearlings. No grain was fed. Prairie hay and cane, each fed alone, did not prove a maintenance ration. Alfalfa and rations containing alfalfa showed substantial gains. Each steer on the average was fed one and one-fourth tons of forage in four months.

The results of all the tests indicate that summer gains are made quite

cheaply in western Nebraska, but that winter gains are costly. Where cattle are run in good native pastures at twenty-five cents per head per month, the cost of gains during six months from May 1st to November 1st is between fifty cents and seventy-five cents per 100 pounds.

The summer gains must be secured so cheaply that they will cover the cost of winter feed as well as the cost of pasturage.

The bulletin may be obtained by writing to the Nebraska Experiment Station, Lincoln, Neb., and asking for Bulletin No. 105.

The constitutionality of the law which provides that cattle in being shipped to market may not be kept confined in cars for a period longer than twenty-eight hours without unloading for rest, feed and water was upheld in a decision handed down at Topeka, Kas., May 25, by Judge John C. Pollock in the United States District Court.

What a few sheep will eat on the average farm will scarcely be missed, they will help to keep the farm clean, and will add to its fertility, to say nothing of the "two crops" furnished by the sheep.

A GOOD TIME TO BUY.

We all hold it as a theory that the time to buy is when prices are low, and that the time to sell is when they are high. As a matter of fact, however, we pay this theory very scant respect in actual practice. Generally we follow precisely the reverse policy. When prices are soaring, then we buy, often paying prices out of all reason, and with no just relation to the value of the thing purchased.

There hasn't been a better time for a good while for purchasing pure bred cattle and hogs. For various reasons which are pretty generally understood prices are low at the present time.

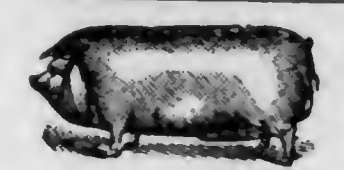
It is also true that prospects for good times in the pure bred live stock business are unusually good. With low prices and good prospects, shrewd buyers ought to be busy. But it is to be feared that too many will not buy until the higher prices they are prophesying actually arrive. Buying will be brisk then, but there will be a large assortment of regrets that the buying was delayed so long.

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of trains, trolleys or automobiles if driven with a "Boery Bit," the only absolutely safe and humane bit made. "Four Mile In One." Quickly adjusted to suit any mouth. Write me today for trial offer and much valuable information.
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Have some extra choice Fall pigs, both sexes. If you are looking for good ones write me.

D. W. SHELLABARGER,

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Chester Whites
I have them combining the best blood in Chester County. If you want the good old Chester that has made this county famous, we have them here that will please you. We breed and sell only the best. Write me.

L. WEBSTER, - Kelton, Pa.

GREENWOOD STOCK FARMS

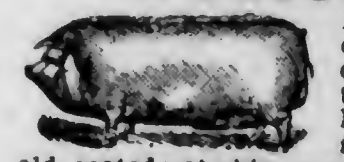


Farmers and Breeders I now have a large stock, probably the best I ever owned, thoroughbred Poland-China and Chester White Pigs. 2 to 6 mos. old, sows bred, boars ready for service, all from prize winning stock. Guernsey and Jersey Cattle. Buff and Barred Plymouth R. Chickens.

Farms and Residence, Greenwood, Pa.
Address **C. H. DILDINE,**

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Bargains in Poland Chinas, Berkshires & Chester Whites



I now have a large stock of probably the best I ever owned. Cannot tell you all here, but I have Boars and Sows, all bred, 2 to 6 months old, sows bred and boars ready for service, Guernsey Calves and Registered Scotch Collie Puppies. Write for prices and circulars. This stock must go and will be sold. M. B. Turkey, Barred and White F. Rocks, Brown Leghorns and Beagle Dogs

P. F. HAMILTON, - Cochranville, Pa.

BRITISH PIG BREEDING AND FEEDING.

To manufacture a first class carcass of pork from an ill-fed, badly bred pig is nearly as difficult as to make a "silk purse out of a sow's ear." The selection of the parents of the castrated boars and the spayed sows, which are to be fattened is, therefore, of vast importance.

Considerable attention is now being given to the system of rearing but one litter of pigs, and then fattening the sows. One of the reasons given for this plan is that young sows, when fattened, will take the place of a fattened castrated male, or spayed female, and thus would realize more per pound than would an aged sow when fattened; also that in certain districts the majority of pigs are fattened within a certain few months, and therefore it would not pay to keep the older sows to produce only one litter per year, says W. R. Gilbert, of Alberta, Canada, in the Prairie Farmer.

Either of these reasons is a good one since it is generally acknowledged that the most successful pig feeder is the one that has fat pigs to sell at all seasons of the year, but particularly in July and August, as the highest price is then generally obtained for pork, while it has cost less to produce a given quantity of pork in warm than in cold weather. It has been conclusively proved that in severe weather the whole of the nutriment contained in the food is required to keep up the animal heat of the pigs, so that no increase in weight is made.

Again a well matured sow will rear at least 20 per cent more pigs at less cost per head than will most young sows with their first litters, besides this the proportion of weakly pigs will be smaller.

Naturally there exists a considerable difference of opinion as to the type or style of pig most generally profitable. The first point considered is the market which the pig breeder proposes to supply. In London and other large cities, the chief demand is for pigs some four to five months old and weighing about 60 pounds dead weight; for this the Middle White Yorkshire is kept, and often crossed by a Berkshire boar.

The form and weight of the fat pigs required in other districts varies from the so-called bacon cures' pig of some 160 pounds dead weight to the 250-pound to 300-pound fat pig wanted north of England. For this finer quality Large White is the more general favorite, while in some districts the Tamworth, both pure and crossed, and the Large Black are preferred.

Consumers generally are much more particular as to the quality of the pork which they purchase so that those pigs which furnish the greatest proportion of the higher priced points are the most popular to breed and to fatten.

The term of life for the fat pig is so short that climate cannot materially affect its growth and thrift; in fact the life of the pig should consist of only one part—the fattening period—not, as is far too frequently the case, a long slow period to be followed later on by a more or less long period of fattening; by this an enormous loss is sustained, for after three months the cost of producing a pound

of meat increases, so that a loss results in a few months.

In England, it always has been and will remain a moot point as to whether it is more profitable to breed pigs and then sell them when they are eight or nine weeks old or to keep them for six months and sell at strong stores, or to breed and fatten them; at present the last is in greatest favor. Apart from individual gain this system lends itself to the improvement of the pig stock of the country, as the breeder and feeder is given a strong incentive to breed pigs that they will grow more quickly and fatten more readily on a smaller quantity of food.

The management of sows and young pigs varies with the district. In many, if not in most instances, the sow may be kept at little expense during the three months after the rearing of her pigs—a run in the grass fields being nearly sufficient; then when the grass loses its quality, or becomes less in quantity, an addition of peas, beans or corn (soaked) is given, or roots of every kind are given raw—potatoes only being steamed or boiled. In regard to feeding, the Wiltshire bacon is made from pigs largely fed on barley meal, but there is no denying there is a thinness about the shape of the hams. The celebrated York pigs are largely fed on potatoes and ground oats, which produce fine, well shaped meat without being too fat. In Ireland the general feed is corn meal and potatoes, and as the Irish hams are justly celebrated it would seem that the mixture is a good food. It is generally accepted among pig feeders that a mixed and varied diet is the best for pigs, just as it is best for human beings.

There are two kinds of feeding which have proved not to produce good bacon. First, feeding on fish; the bacon tastes and smells of it, a combination of flavors not acceptable. Second, the waste products of breweries; though they seem to nourish the animals, they produce soft, watery bacon.

Finally, the great aim of breeders is to get a breed that will at once feed and mature quickly and produce a fine, lean marketable pork, but the two things are not so easily attained. A breed of pigs with long noses certainly produce in England leaner meat than do those with the very short snout; but when that breed gets into the corn belt, it fattens so rapidly on the corn that in three or four generations the new pig is producing as fat meat as his predecessors; so it is a pity we cannot find out a method of feeding, something like that of the Irishman, who fed his pig well one day to make fat, and starved it the next day to make lean meat.

INTERNATIONAL LIVE STOCK EXPOSITION—DATES EXTENDED—NOVEMBER 28 TO DECEMBER 10, 1908.

The classification, with a few minor changes, will be the same as for the 1907 exposition.

Cattle—Polled Durham cattle were given a junior and a senior classification.

Carload Classes—Entries in these

BLOODED STOCK for July—1908.

classes will close November 21, one week prior to the opening date of the show, and the animals must be in place not later than noon, Saturday, November 28. The animals exhibited will be judged on the following Tuesday and remain on exhibition until December 3, 1908.

Carcass Classes—A separate classification was adopted for the live animals entered in the carcass classes, the latter to be judged on hoof as well as on the block.

Short-Fed Special Classes—Additional special inducements will be offered to exhibitors in these classes.

Sheep—The Hampshire-Down, Dorset, and Lincoln sheep were given increased appropriations.

Sales—Hereafter all sales of purebred sheep will be conducted under the auspices of the different registry associations; consignments to be accepted only from "International" exhibitors.

Sheep Entries—In the future, the number of entries will be limited to three head in any one of the ram, and to four in any one of the ewe classes; animals brought in excess of this number will be placed in such pens as the superintendent of the sheep department may designate.

College Classes—It was decided to have but one team from each agricultural college take part and go through the entire work of judging instead of two, one for horses and another for cattle, hogs, and sheep, as in the past.

Corn Judging—The corn-judging contest was eliminated from this show.

Ponies—Shetland ponies were given a special classification for the 1908 exposition.

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BLOODED STOCK for July—1908.

THE FERTILITY OF EGGS.

Officials of the Department of Agriculture have been collecting data regarding the factors which affect the fertility of eggs, the question having been carefully studied at a number of experiment stations in the United States and elsewhere.

Too warm quarters for laying stocks and overfeeding are commonly believed to exercise an unfavorable influence on egg fertility as well as does a cold season. The way eggs are handled or stored is also believed to affect the proportion which will hatch, as will also the conditions under which incubation occurs.

The vigor and character of the parent stock and the length of time the male bird has been with the flock are also important questions with respect to egg fertility. At the outset it should be pointed out that fertility and "hatchability" are not necessarily identical.

An egg may be fertile and still the germ does not have sufficient vitality to produce a healthy chick under the ordinary condition of incubation. In a series of incubator experiments at the Rhode Island Station, of 8,677 eggs tested, 83 per cent were found to be fertile, while only 46 per cent of the fertile eggs, or 38.6 per cent of the total number of eggs, hatched under the conditions of the tests.

The various observations made, while not necessarily conclusive, indicate that, in order to secure fertile eggs, which will hatch, the laying stock must not be kept in very warm quarters or overfed; the males must be kept with the hens continuously and that only eggs should be used which are produced after the male has been with the hens several days.

Only the fowls from very vigorous parent stock and those known to produce a high percentage of fertile eggs (hens vary widely in this respect) should be used; the hens should be allowed to rest after each laying period, while the eggs should be handled carefully, not subjected to extremes of temperature in storage and used only when comparatively fresh.

CHANGES IN REGULATIONS REGARDING CANADIAN SHEEP.

The Department of Agriculture has amended its regulations governing the inspection and quarantine of imported animals so as to require a quarantine of thirty days for sheep imported from Canada for breeding purposes. This action has been taken by amendment 3 to Bureau of Animal Industry Order 142.

The regulations as amended provide that all sheep imported into the United States from Canada for breeding, grazing, or feeding must be inspected at the port of entry by an inspector of the Bureau of Animal Industry, and also must have been inspected by a Canadian official veterinarian and accompanied by a certificate signed by him, stating that he has inspected the sheep and has found them free from disease, and that no contagious disease affecting sheep has existed in the district in which the sheep have been kept for six months preceding the date of importation. The owner or importer shall present an affidavit that said certificate refers to the sheep in question. Sheep

which upon inspection by an inspector of the Bureau of Animal Industry do not show signs of scabies or other disease may be imported from a district infected with scab if such sheep are accompanied by a certificate signed by a Canadian official veterinarian, stating that they have been twice dipped under his personal supervision, or under the personal supervision of another Canadian official veterinarian, in one of the dips approved by the Secretary of Agriculture.

In addition to the lime-and-sulfur and tobacco-and-sulfur dips heretofore authorized, the amendment allows the use of approved coal-tar cresote, and cresol dips.

FATTENING LAMBS AND WETHERS.

The greatest and most profitable gain to be made by the feeder is in the younger days of his lambs. By feeding grain to the lambs before weaning they will produce an average of 70c per head more profit at weaning time than if no grain had been fed.

By feeding some bran, linseed meal and oats before weaning and a small quantity of oats after weaning, it will pay to the owner a direct profit if the lambs are to be sold at any of these times. If the lambs are to be sold in the fall, the feeder can make them produce an average of 35c per head more profit by feeding grain before and after weaning. When oats, bran and linseed meal are fed before and after weaning they will not influence the gain during the fattening period, which is usually three months, but the cost of gain is generally on an average of 30c per 100 pounds cheaper than in the instance of the lambs that have had no grain. In a flock of lambs that was marketed not long ago, the feeder said that the most profitable features of grain feeding lambs was observed to be the early maturity they had made by being fed grain from birth till they were marketed.

If one will make a trial, they will find that by feeding lambs grain from birth they will attain a general average weight of 133 pounds 7 weeks earlier than if they had no grain previous to fattening and that this weight can be reached at a smaller cost if the lambs are fed grain from the start.

There are many systems of feeding in general practice. One of the best is to feed the grain first, then the succulent food and last the dry fodder.

When fattening wethers induce them to eat as much as possible. When they are about three weeks old begin to get them to eating by putting some oats, bran or linseed meal in a small trough where they can get it when they want it. By keeping the feed handy for them they will begin to learn to like it quicker and when ready to wean, they will eat up eagerly all the grain you give them. Good and better results can be had by feeding the grain in two or even three feeds, if less than 100 are fed together, but with more than that it is not a commendable plan. A very important matter in feeding wethers is to gauge their appetites; this can be done by feeding only one-third of the fall feed. The smallest degree of overfeeding will react on the gain of sheep; but in many instances it

causes scouring, in others, constipation and in some the result is the loss of some of the flock.

The greatest essentials that contribute to cheap and rapid gains are quietness and confinement. Keep the flock where there will be no dogs or anything to frighten or abuse them. The least excitement brought on in any way can be told by the owner when put on the scales. When fattening wether lambs the feeder must give careful attention to the quantity and amount of grain that he feeds. By doing this the feeder will get better returns in the shortest length of time. During the first two weeks it is better to give only one-half what they need than to feed them too much.

When making the start on a flock be sure to do it well and safely, especially if they have been accustomed to grain. Some foods are safer than others to feed at the beginning, among these are oats or bran. Wheat is comparatively safe, but corn is the most dangerous grain to be fed. A liberal feed to begin fattening on is one pound per head daily of either oats, bran or wheat, if they are accustomed to grain, but if not accustomed then give a lighter quantity. Gradually increase the quantity of grain as the capacity of the sheep becomes greater.

When fattening wether lambs give them some succulent food in their ration and they will remain healthier (Continued on Page 14)



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STARTING ALFALFA.

Alfalfa is a new and most important crop for Illinois. It will yield four to six tons per acre. It will produce such crops for six or seven years without re-seeding. Alfalfa hay contains more protein than red clover and is about three times as rich in this costly and essential food element as timothy hay, and practically equal in feeding value to the same weight of wheat bran. If the farmer raises alfalfa he will not need to buy but little if any bran or other nitrogenous feed. Alfalfa in any form is eaten greedily by most farm animals. Its growth is of immense value to the land. Like clover it brings nitrogen from the air to the soil, and its roots penetrate much deeper than those of the clover, bringing up fertility from below, loosening the soil, and adding quantities of organic matter. It has been thoroughly demonstrated that alfalfa can be profitably grown in most of the counties of Illinois.

Now is the time to plan the growing of a few acres of alfalfa, and the following definite instruction given by Dr. Cyril G. Hopkins, of the University of Illinois, will be found of exceptional value, because he has had probably more experience in growing alfalfa and under wider observation of this crop than any other man in Illinois. Following are carefully condensed items from his address and answers to questions at the last meeting of the Illinois Farmers' Institute:

Alfalfa is a hard crop to start. It is delicate and tender, and to put alfalfa on ordinary land without any protection or any help, is like throwing away \$4 an acre. The money is ordinarily wasted if you sow it as you would clover or most other crops. I think that at least three-fourths of the alfalfa seed sown in this State is the same as wasted. We want to prepare and enrich the land and give alfalfa the best possible chance to start with. If the land is sandy, put on 20 loads of manure per acre, 30 loads would be better. You are preparing the land, not for one year, but for ten years. You can afford to do almost anything to get it in shape.

The land should be worked until it is free from weeds. You cannot have alfalfa prosper with weeds and foul grass; destroy them before you sow the crop. If you will have the land free from weeds and the surface soil enriched, so that the alfalfa will live, say two years, then it will grow and take care of itself.

Alfalfa gets its roots away down below where any other crop has been. It draws phosphorus and potassium from the deeper soil. It is not necessary to apply phosphorus to alfalfa land. If the soil is acid, put on plenty of ground lime stone and manure.

Get five cents worth of blue litmus paper from a drug store, break in two a mass of the soil, insert a piece of the litmus paper, and press the soil firmly together again. After ten or twenty minutes remove the soil and allow the paper to dry. If the dried test paper is pink or red, compared with the original color, the soil is acid and needs the ground lime stone, about one ton per acre, thoroughly mixed with the soil.

If you have clean, rich land, you can seed alfalfa the last of April, but

from a good many years' experience we advise sowing alfalfa between the middle of July and the middle of August. Have the ground made rich the year before and well drained. Plow the ground in the spring at the time you would for corn, then disk it or harrow it about every week or ten days until you are satisfied the weeds and foul grass are practically all started and killed. If it takes until the middle of August, why work it until then. When the weeds come, kill them with your harrow. In a few days there will be another crop of weeds spring up. Go on with your disk and harrow your ground, and let the weeds come up as long as they will, kill each crop. You have both killed the weeds and preserved moisture.

Then thoroughly inoculate the ground and sow 20 to 25 pounds of good alfalfa seed and harrow it in well. If the ground has been well manured the year before, I cannot tell you any better way than this, but I don't believe it is necessary to thus give up the use of the land, and I think after you have found that you can grow alfalfa you will follow the plan of taking a field that has been in winter wheat or clover, plow it immediately, work it a month, and sow it about the last of July. If you have harvested the clover hay crop you can give up the land the last of the year to get the alfalfa started. After the oats crop it is getting too late; following winter wheat is better, and following clover hay is best of all.

See that the soil is inoculated so that you will have bacteria there to enable you to get nitrogen from the air. The best method is to use soil that has bacteria in it already. You can get this from an old field where alfalfa has been growing several years, or you can get it from an old patch of sweet clover. Soil it in at the time you sow the seed. When the soil for inoculation becomes somewhat dry it is easily scattered by hand from the wagon or from a sack which one can carry. Sometimes it is applied by means of an endgate seeder or a fertilizer drill.

Don't scatter infected soil over the land and let it lie for many hours in the hot sun, for most of the bacteria will be killed. Use a wagon load to the acre if you can get; the more the better.

There is not much objection to getting a few sweet clover seeds in the field. Sweet clover is a two-year plant, while alfalfa lives many years. As the alfalfa is mowed three or four times during the season the sweet clover will likely not have time to go to seed. The few plants in the field will not live long. To get the soil for inoculation scrape off one-half inch of the surface and then plow a furrow three or four inches deep. At the experiment station we have more than doubled the yield of alfalfa by inoculating the soil so that the plant can get nitrogen from the air.

Alfalfa is almost always benefited by mowing; next to that is disking. If it does not do well mow and disk it. We want to get nitrogen into the soil and consequently the soil must be open and porous. That is one reason why we disk alfalfa when it gets a year or so old, after every cutting; disk it at first if the ground is hard. Set the disk not too slanting; so that it won't cut the crowns off, and don't

BLOODED STOCK for July—1908.

set it so it will cut the roots off. Disk it twice, if it is all right. You can set the disk pretty straight the first time; the next time set at a sharper angle. The two objects are to loosen up the ground so the nitrogen will enter and to root out blue grass and foul weeds. The disking won't kill the deep alfalfa roots.

SUCCESS IN SPEED BREEDING.

While the "fine spun" theories of many writers on the subject of successful speed breeding often furnish entertaining reading and many times real valuable information, the fact remains that the "fad and fancy" fellows, those with the finely drawn, "sure thing," scientific theories—have never figured in trotting horse history as preeminently successful trotting horse breeders. Indeed, it is a part of all histories bearing on the subject of human success than in the operations of the imperfect, or at least imperfectly understood sciences, that mental faculty so often referred to as "horse sense" has always been the source of the most conspicuous and most uniform success. The greatest and most successful trotting horse breeders have not been followers nor advocates of finely drawn theories; indeed, have seldom expressed other than general ideas on the subject of speed breeding, they leaving the matter of hair splitting theorizing to those who theorize only, but do not succeed in life by putting their own theories into actual operation. This is not saying nor implying that the great and successful breeders have not been thinking men. On the contrary, they have been profound thinkers; but they have done their thinking along the "horse sense" line, and have not bothered themselves about the first-foal slush, the every-other-year-to-the-same-sire foolishness nor yet the "easy virtue" idea of low record sires and dam, or no speed production.

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BLOODED STOCK for July—1908.

Successful breeders have, without exception, been plain, practical, "general principle" men—men without hobbies, pet theories, and "chemical compound" formulas for speed products. They have been men, who, while keenly appreciating good blood lines, and would have nothing else, have been able to recognize real quality and predominating characteristics in both sires and dams, and have possessed a keen sense of individual selection and mating, and who have not allowed their judgment to become clouded through prejudices through overstrong likes and dislikes for certain families. Governor Stanford had a strong liking for thoroughbred blood on the dam's side, but at that, no combination of thoroughbred blood could lead him to select a thoroughbred mare for harness speed breeding purposes which did not possess the individual characteristics of gait, disposition, etc., which his keen conception and "horse sense" told him were essential to his purposes. He possessed extraordinary ability in the matter of individual selection, and through the aid of one of the greatest trainers of the age, he succeeded admirably with the thoroughbred cross, while those who have tried to follow his plan have, as a rule, relied on the thoroughbred cross, per se, and have failed, even to keep the Electioneer family "going." Col. R. P. Pepper was another breeder who had no "pet theories" nor whims, and who did not fool away his time and money trying to evolve a "solar plexus blow," "planting in the moon," finely drawn scientific theories. He bred trotting-bred mares to trotting-bred sires, keeping in view temperament and other individual characteristics and qualities in his matings, and he succeeded. Among later breeders of the most remarkably successful class we have the Cecil Brothers, of Danville, Ky., who were from the first, and have remained so, absolutely free from "freak" ideas. They first selected Gambetta Wilkes, a Wilkes-Morgan-bred stallion, possessing very marked individual quality and characteristics, and surrounded him with a harem of well-bred, mostly young and untried, carefully selected, "orthodox"-bred mares, relied on "horse sense" methods in their breeding operations, and succeeded, not only in producing a greater percentage of speed than any former breeder, but in producing the kind and class wanted by the general public, and in making a fortune in the trotting horse business. There is nothing else so expensive as "freakish" ideas in trotting horse breeding, nor is any other element of success in trotting horse breeding so strong as is the plain, old-fashioned faculty, "horse sense."

That Mr. Keene has met with his share of misfortune can be shown by the fact that within the past ten years at least a dozen of his best mares have died, in addition to losing Domino, Commando, and Sysonby. At Castleton no mare of faulty conformation is deemed worthy of a place in the stud and none but the most richly-bred matrons are deemed worth while. Descendants of long lines of winners of fast events, daughters of famous producers, have been collected for many years, and today his stud is conceded by the best authorities in England and this country to contain a greater number of priceless brood

mares than any other establishment in existence. Stallions who have been failures as race horses are discarded and even those whose successes on the turf justified the experiment of giving them a place in the stud are condemned unless their success is immediate. Last season the representatives from the famous breeding farm won over \$400,000, and already thus early in the year the campaign of 1908 has been a brilliant one. Colin, unbeaten as a two-year-old, at which age he won 12 straight races, ten of which were stakes, has continued his brilliant form and after capturing the Withers Stake at a mile, and having apparently broken down, has quickly recovered and won The Belmont at one and three-eighths miles. The three-year-old Celt, by Commando, finished first in the Brooklyn Handicap, an all aged event in which the best thoroughbreds in this country struggled for supremacy, and it begins to look as if the success of last year may be duplicated. In breeding the race horse, as in the production of every form of blood stock, the best is none too good and anything short of first class can not with reason be expected to reproduce itself.

"Book learning" is good or not, depending on what use is made of it. We have noticed this at any rate, that the most successful raisers of

live stock are students, not always of books, but nevertheless students of the problems they are dealing with. Success more and more comes to the man who knows.

There is no time in the life of a fowl when its vigor and vitality are so well indicated as at molting time. Fowls that molt in a short time and hardly stop laying during that period as a rule have strong constitutions and if properly fed give a large yearly yield. During the molting period is said to be a good time to select layers. If it is necessary to make the selection at some other time then the conformation of the fowl must be depended upon and is a fairly good guide. A long, deep bodied fowl should be chosen as likely to be a good layer rather than the short-bodied fowl with an underline like a semi-circle. A hearty, vigorous fowl such as is required for abundant egg production has a long body, deep chest and a long and quite straight underline.

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erations sufficiently to fill the demand for the better class of trotters—horses for the track, for the road, and for the show ring.

The breeders have noted these facts with the result that stallions in service are being more liberally patronized than ever before. This is well, for trotters can be bred and sold at a good profit, and when one happens to secure a phenomenon, then a small fortune awaits the lucky breeder. Nor should the breeders overlook the fact that the foreign demand has been exceedingly good and that many stallions that could be retained in this country to the advantage of the breeding industry, have been sent to Russia and Austria. These must be replaced, and the only way is to breed extensively and develop the best of the young stallions.

With the racing season not far off, it is plain that owners of racing campaigning stables will have more and richer stakes than ever before to race for, and there will be fully as many horses to contest for the events, as the leading training tracks have full stables. This is added proof that the panic has not had any harmful effect on the trotting industry.

While the trotter and his friends escaped the force of the panic, it is gratifying to note that the leading financiers and captains of industry are expressing the opinion that the turn in the road has been reached and that business is improving all over the country, and that by early fall everything will be in full swing again.

GOING TO EXTREMES.

Prof. Geo. E. Day in his book on swine writes as follows regarding utility from the point of view of the feeder and butcher.

"Utility must be viewed from two standpoints. The butcher requires an animal that will give him the largest proportion of valuable meat, and the farmer requires an animal that will reproduce its kind in profitable numbers and make rapid and economical gains. There would be little use in aiming to please the butcher if the animal did not meet the requirements of the farmer; neither must the butcher be left out of the consideration if a really useful animal is to be produced. In breeding operations, therefore, both these men must be kept in view, and the breeding, feeding and killing qualities must each receive a due share of attention. This point may be illustrated by a reference to the breeding of swine for bacon purposes. One important feature of a bacon hog is the length of side, but it is only one thing out of a number of requirements. Some men, however, have allowed this one point to run away with their judgment and in their efforts to secure length they have sacrificed constitution, feeding qualities, muscular development and general quality. It is regrettable also, that there are judges who will hang the first prize ribbons on these slab-sided, narrow chested, long-legged, coarse-boned, quality-lacking brutes, simply because they possess length. Then, there are men who run to the other extreme, and think that the kind of hog to breed is the short-bodied, fat-backed, heavy-shouldered, thick-necked, tubby little pig, utterly useless for bacon purposes. It is not difficult to see how both these men

have lost sight of utility. The first has sacrificed nearly all that the feeder requires and a good deal of what the packer requires; whereas the other has sacrificed nearly all that the packer requires and a good deal of what the feeder requires, because a really desirable bacon hog is also a good feeder's hog. There are breeders, however, whose view is broad enough to take in both sides of the question and who are producing hogs eminently well adapted to the requirements of the feeder and the packer. Such men are truly successful breeders and their work is bound to stand, because it is built upon a sound foundation, that bed-rock, utility."

THE ENGINE QUESTION—A TIP

It is no longer a question of whether or not the farmer needs an engine—he has already been assured of the many advantages of having a good engine handy for almost any kind of work. But there seems to be a growing tendency on the part of some of the manufacturers to make engines to sell rather than to give good service. This naturally puts the farmer on his guard, but most of them are dealing with the old reliable concern—the International Harvester Company of America.

The engines this company distributes are manufactured on correct mechanical lines. They are required to be of the highest order. That implies not only correct principles, but materials adapted to uses, and workmanship that cannot be surpassed.

The principles were carefully worked out and tested before manufacture began. The record of service of the engines at work has abundantly established their correctness, as well as the excellence of materials and workmanship.

One of the greatest things that has been accomplished is dependability, a positive response of the engine whenever called upon. An engine that cannot be depended upon to start quickly and positively is of little value anywhere, especially to the farmer whose power jobs require frequent stopping and starting.

Smooth, even running and generation of the full rating of power are other features that are next in importance to dependable starting. Then comes the simplicity and ease of control for which these engines are noted. And lastly economy. The engines are adapted to the use of gas, gasoline, or denatured alcohol for fuel. Well posted power men agree that whatever the fuel, the minimum is consumed for the power delivered.

The engines are made in several styles and range in size from 1 to 25-horse power. A letter direct to the International Harvester Company of America will secure catalogue and the information you desire promptly.

FEEDING PIGS.

Men are divided in their opinion as to the advisability of feeding young pigs heavily between the time they are four or five weeks old and weaning time. When one has saved a large average per sow we certainly think that it pays to feed, and that can only be done successfully when a creep is provided for the little pigs. They need something else besides corn, and while mill feeds are high in price, yet it will pay well to use them to some extent.

BLOODED STOCK for July—1908.

We do not adhere to or advocate any special mixture. Five parts ground corn, five parts middlings and one part tankage or oil meal will make an excellent slop for young pigs and we think it pays to mix it up about twelve hours before feeding. With such a mixture little harm can come from feeding all that the young pigs will clean up two or three times daily.

When such a plan as outlined above is carried out you will find that you have bouncing big pigs at weaning time, and there will be no dropping off when that period is passed through. Such pigs are in ideal shape to acquire a good deal of their living on pasture during two or three months after weaning, though, as a rule, we believe that it pays to feed a little grain every day of a growing pig's life.

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HORSES Going Blind, **Barry Co** Iowa City, Ia., can cure

WANTED—30 Dorset Ewes, young and good quality. State number and price. Address **P. P. GHEEN**, Willow Grove, Pa.

FATTENING LAMBS AND WETHERS. (Continued from Page 11.)

and will not be troubled with the disorder called stretches and will make better gains. A flock can seldom be raised on dry food alone without some of them dying or suffering with constipation. Fodders of some kind must be fed to wether lambs. Clover hay is the most valuable, as the sheep will relish it, then comes pea straw, corn fodder and timothy hay.—A. S. in

BLOODED STOCK for July—1908.



Spreading of Cattle Prices.

A feature of the trade in cattle at this time is a widening process between the grass and good, corn-fed offerings. The former kinds are on the increase and the latter on the decrease. There will be plenty of the grassers for the trade requirements right along, but it is a patent fact that finished corn-fed lots back in the country are in the smallest numbers in many years. Thus it is only logical that the spread will be exceptionally wide. We confidently expect to see corn-fed cattle in two-thirds to ripe condition and possessing quality sell at relatively strong figures right along but are less hopeful regarding the future trade in the plainer classes of corn-fed lots, as well as the grassers. The betterment in the flood conditions in the Southwest has let loose a torrent of offerings from Texas and from the Oklahoma and Kansas pastures, while native grassers will also increase in numbers from now on, with rangers from the Northwest to follow these. Slaughterers are having things more their own way for the short-fed natives and grassers, and if these continue in liberal supply it would not be surprising to see values seek still lower levels.

Bright Outlook for Hogs.

Hogs are in the limelight by reason of the upward trend of the price range lately, and the good, healthy undertone to the market. It would seem as though the supply in the country has at last dropped to a point where packers will not be able to help themselves plentifully from the bargain counter. Prices have worked to the highest level since last October, when \$7.00 was the summit. We believe that there will be further strengthening of the price range before any serious slashing of values occurs; there is a better fresh meat demand, the South is taking on more of their kind of meats than for many months, shipments are on the increase, and stocks of provisions are being heavily drawn upon. These facts, coupled with the smaller runs of good, fat hogs, are surely indicative of a good trade.

Heavy Swine are Popular.

Light hogs are not enjoying the popularity that they did at this time last year. The reason for this is that there is an abundance of them coming here as well as at the outside points, the high price of corn and the much fewer cattle in the feed lots driving thousands of them to market that would otherwise be held back

for longer feeding. This has resulted in a widening of the spread in prices, the margin being around 60c, as against 40c a year ago. On the other hand, heavy swine are in smaller proportion than usual this year, as indicated by the average weight being upwards of 15 lbs. lighter than one year ago, which explains why big-weight porkers are selling at a premium on the lighter weights, which is unusual during the summer months. Last year the market was being liberally supplied with heavy hogs, the reasonable price of corn and the good price of stock on hoof in late winter months causing many producers to overstay the market. At that time more good weighty swine were coming than packers really needed, and the spread between them and the light weights was around 20c, in favor of the light weights, while at this time heavy weights are going around 10c higher than the lights.

Poor Trade in Sheep.

Conditions surrounding the sheep market are bad. The dressed mutton trade both here and in the East is in wretched shape, and there is promise of increased marketing. Thus hopes of any material advance in prices are not likely to materialize soon. Kentucky and Tennessee have many lambs to market yet, natives in abundance are to come forward, and the movement from the Northwest range will set in before long. Liberal receipts of native sheep are expected, especially ewes, and the Northwest will soon keep the market plentifully supplied. Unless the consumptive demand broadens greatly and the country takes hold of the stock suitable for grazing and breeding purposes it will look as though the packers will make good their claim that the low spot of the market has not yet been seen. However, undue rushing of stock to market, especially such as lacks good condition for slaughter, would prove a heavy blow to the interests of the producers, while careful and judicious shipping would tend to help them greatly.

Record June Run of Sheep.

Receipts of live stock at Chicago during the month of June totaled 226,788 cattle, 43,442 calves, 639,507 hogs and 351,539 sheep. These figures show increases in everything except calves, which decreased nearly 5,000 as compared with the month of May. Receipts of sheep were the heaviest for the month of June in the history of the trade, caused by a congested supply of Colorado lambs early

in the month and a liberal run of Southern spring lambs later. As compared with receipts the same month in 1907, last month's supplies of cattle decreased more than 8,000, while calves increased 5,000, hogs increased 43,000 and sheep 51,207, against 28,009 a year ago.

June Trade Up and Down.

An important feature of the markets during June was the erratic conditions most weeks. Trade in cattle was of an up-and-down variety throughout the month, yet prime corn fed beeves reached \$8.40 towards the close, being within 10c of the June summit in 1902. The lower grades went to the highest level of the year earlier in the month, but in late days broke 75c@\$1.00, the liberal supplies of Texas grass offerings and a smaller shipping demand contributing to their downfall. It was a great month for hogs, as indicated by prices at the close, climbing to the highest basis since October last, and bulk making \$6.40@\$6.60, top \$6.67½, against \$6.25 for top the corresponding day of last year. The record run of sheep and lambs put this branch of the market to the bad, values at the close of the month being at the bottom of the year and generally \$1.00@\$1.50 lower than one year ago, bulk of spring lambs going at \$5.50@\$6.50, most yearlings at \$4.35@\$5.25, and mutton sheep in main at \$3.50@\$4.25.

POLAND CHINAS

With size, bone and quality. Boars of Spring 1907 farrow, Summer gilts and September pigs at prices to match the times. Write for circular.

A. F. SIEFKER,
R. D. No. 1, Defiance, Mo.

THE OUTLOOK.

So far as the trotting horse industry is concerned it has felt little of the business depression that followed the inauguration of the panic last fall. The sales throughout the non-racing part of the year were uniformly successful, and the only drawback being the lack of sufficient numbers of really high-class trotters. This proved that not only have the breeders not been overstocking the market, but that they have not extended their op-

Back of the Bank Book

Is the "Tubular" Cream Separator

EVERY dollar of the farmers' and dairymen's money in the banks of this country represents hard labor and wise economy. It represents head work as well as hand work. But it is a fact that the farmers and dairymen whose balances in the bank are the biggest are not always the men who work the hardest with their hands—nor even the ones who farm the most acres or milk the most cows. They are mostly the men who make every move count by employing the latest appliances and the most economical methods in their work. They are the men who make mind master over muscle. Much of their wealth is therefore the result of economy—the saving of what others waste. This means that they are always figuring on how to increase profits without increasing expenses. The first question with such men, when considering the purchase of a new machine is, not how much will it cost, but, **what will it do?** Will it save anything which now goes to waste? Will it do this profitably? That's the test we ask you to apply to the "Tubular."



Saved Price in One Season.

CHERRYVALE, KAN., June 13, 1907.
I can sell my butter to customers where I never could sell it before getting the separator. We milk six cows and it will make more than enough butter extra to pay for the machine in this one season.
LAURA I. TURNER.

Twice as Much Cream.

PINE BLUFFS WYO., May 14, 1907.
We get twice as much cream as we did skimming by hand. Tubulars soon pay for themselves.
MRS. W. G. RUSSELL.

Twice as Much Butter.

KAW, OKLAHOMA, April 24, 1907.
Make about twice as much butter from seven cows, and of a better quality, than we did without it.
MRS. MARELLA.



The Best by Every Test

We ask you to apply this test because it will be to your interest to do so. If the "Tubular" will increase your profits without increasing your expenses you ought to have it. It will. It will make every cow you milk earn more money. That's why we want to put a "Tubular" back of your bank book. Thousands of farmers and dairymen testify to the merits of our machines. They say the "Tubular" pays for itself in a short time. When it has paid for itself all that it saves is clear profit for there's no expense—it won't cost you a dollar a year for repairs. We've built it so that it can't.

If you are economically inclined; if you want to save money and increase your bank account here's your chance. Our valuable book, "Business Dairying" will show you how, and our latest catalog tells all about the "Tubular." We'll send them both free if you will write today, ask for book No. 300.

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BLOODED STOCK

Remember the September number of
Blooded Stock comes out in new form.
Renew your subscription at once.

Vol. XIV AUGUST 1908 No. 6

POULTRY INSTITUTES IN COLORADO.

According to the best estimate, \$3,000,000 worth of poultry and poultry products were shipped into Colorado from the corn belt last year. It is estimated that all the poultry marketed in the State during the entire year was barely sufficient to supply Denver for sixty days.

Colorado has ideal conditions for poultry production. Dry climate, 320 days of sunshine each year, and feeds which produce the finer flavored meat and eggs and corn. Our Colorado field peas produce a flavor in poultry which is not equalled by any other feed. For these reasons Colorado should not only produce all the poultry and poultry products needed in the State, but should command the high priced markets of the East, where quality and delicious flavor bring a premium.

To stimulate interest in poultry growing throughout the State, and to bring to the attention of a large number of people the best methods of feeding and managing poultry, the Colorado Agricultural College is planning to hold a series of poultry institutes during the month of August.

A strong corps of practical poultrymen have been engaged for these institutes. Judge C. H. Rhodes, noted all over the United States as an expert poultryman and poultry judge, will give two lectures at each institute, and has requested an exhibit of typical birds of each breed grown in the State. Dr. J. W. Downey, of Fort Collins, who has been recognized for twenty years as one of the most successful growers of pure-bred poultry in Colorado, will discuss money-making methods of handling pure-bred poultry. Prof. H. M. Bainer, of the Colorado Agricultural College, has made a special study of practical buildings for poultry and practical poultry appliances. His lectures on these subjects will be illustrated by large charts and working models. R. C. Clay and L. L. Johnson, both of Colorado Springs, will handle the commercial side of poultry work. Mr. Clay keeps 2,000 hens and makes a specialty of eggs and early broilers. Mr. Johnson has made large profits with eggs and with squabs. Each place will furnish at least three papers from successful local poultrymen.

The poultrymen of the State are taking hold of these meetings with a hearty goodwill, and a large attendance is promised. Colorado Springs has a committee of two hundred and has already been three months working up their meeting. The other places are taking hold with a vim.

HOG FEEDING.

Wide-awake men realize that with high-priced corn it is impossible to make good profits by feeding inferior stock and so they raise the class of hogs that will produce the greatest returns. The hog that requires 700 or 800 pounds of corn for every 100 pounds of gain is not wanted if hogs can be secured that will produce the same gain for 500 pounds of corn or less.

But even with the best improved hogs, the largest profits are not assured unless they are properly fed

and managed. Throughout the corn belt, corn is the staple grain used in feeding hogs and it is usually the cheapest grain that can be used for this purpose. Yet when it reaches the prices which have prevailed during the past season, only the most judicious feeding can be practiced if there be any hope of securing profitable returns.

Corn alone is not a good ration for hogs. The growing animal requires a certain proportion of muscle-forming material along with the fattening nutrients of the food. From the farmer's standpoint, the important functions of the protein are the production of lean meat, tendons, wool, hair, and building up and maintaining the vital organs of the body. The carbohydrates and fats are used in the formation of heat and energy of the animal body. Corn is rich in the fat forming compounds, but is deficient in protein and consequently the best results cannot be obtained by feeding it alone. Even when hogs are considered fairly well matured and are simply being fattened, experiments have demonstrated that better results are obtained by feeding a ration containing a higher percentage of protein than is contained in corn. Of course the price of the different food stuffs obtainable will influence the feeder in making his selection and there may be conditions, such as low priced corn and high priced concentrates, that would justify him in feeding a ration consisting entirely of corn.

During the summer months, there is probably no cheaper ration than corn and alfalfa pasture in the districts where alfalfa can be grown. Even where alfalfa does not do well, there are other pasture crops, such as wheat, rape, cowpeas, soy beans, etc., which are valuable adjuncts to corn. But many farmers may be so situated that they find it advisable to buy some commercial food to supplement corn in preference to growing pasture crops.

This station has just completed a hog feeding experiment conducted for the purpose of determining the relative value of several different food stuffs as supplements to corn. Thirty

BLOODED STOCK for August—1908

head of Duroc-Jersey and Poland-China hogs were selected and these were divided into six lots of five each. The following rations were fed:

- Lot 1. Corn meal.
- Lot 2. Seven parts corn meal, 1 part Armour's meat meal.
- Lot 3. Eleven parts corn meal, 1 part Armour's meat meal.
- Lot 4. Four parts corn meal, 1 part cottonseed meal, alternated every other two weeks by corn meal alone.
- Lot 5. Corn meal, alfalfa hay (ad libitum).
- Lot 6. Corn meal, cowpea hay (ad libitum).

In this test the cost of making 100 pounds of gain in each case was as follows: Lot 1, \$8.01; lot 2, \$4.94; lot 3, \$4.73; lot 4, \$6.38; lot 5, \$5.88; lot 6, \$6.67. These results show a very wide variation and a very expensive gain for lot 1. The hogs in this lot were somewhat off feed during part of the experiment, but that is just what is likely to happen when the hogs are fed only corn.—From Press Bulletin of Oklahoma Agricultural Experiment Station.

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Poultry-raisers have found that the better the incubators and brooders they use, the better the foods they feed, the more money they make, and the more pleasure they get out of their fowls. We want to supply you with the better incubators and brooders, foods and supplies. We manufacture and market the best goods in the world in our line. The "United" incubators and brooders—standard the world over, and favorites with poultry people—are our leaders in the machine line. "Bantam" and "Fidelity" fowls need no argument to convince you of their merits. We manufacture and guarantee them. By buying all your supplies at one place you will save on freight, and will always get a quality you can depend on. Send us your orders and save money. Before you buy elsewhere write for our free catalogs. Do it today.

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Bull born Feb. 27, 1908. Sire—Topsy Ormsby Prince, whose two nearest dams have official 7-day butter records averaging 26.9 lbs. each, their milk averaging 4.88 per cent. fat. Dam—Amarilla Maid Ormsby, with an official record of 378 lbs. milk, 11.85 lbs. butter in 7 days as a 2-year-old. Her dam, Amarilla's Maid, has an official record at 4½ years old, of 425.1 lbs. milk, 18.1 lbs. butter in 7 days; and the latter's dam, Amarilla (imported) has well verified records of 92 lbs. 5 oz milk in one day, and 20.132 lbs., 15 ozs., in one year.

This bull is a splendid animal, well developed, beautifully formed, handsome and attractive. We offer him to you with a helper of equal quality and breeding, for the very low price of \$100.00. The pair are just what you want for foundation purposes. In establishing a herd, everything depends upon your foundation stock. Be sure to start right. The price named is for the two animals carefully crated, F. O. B. the cars, registered and transferred to you on the records of the H. F. Association.

This is a very special offer and cannot be repeated after our present stock is reduced.

AUGUST

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Published on the Twenty-fifth of each month
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Clubbing offers will be found on another page.

BLOODED STOCK for August

FEED FOR SWINE

Prof. W. A. Henry, in his book, "Feeds and Feeding," says: In this county Indian corn must continue the common feeding stuff for swine. Because it is rich in carbohydrates and fat and low in protein and ash, the special function of this grain in pig feeding is the production of fat. Having a proper knowledge of its compositions and limitations, the feeder is in position to wisely use this great cereal. For breeding stock, corn should constitute not over half the ration at any time, the amount being smallest with young animals. As the body increases in size and nears maturity, the demand for protein and ash becomes less, and the proportion of corn to other grain can be gradually increased, until during the fattening stage the ration may, if desired, consist almost wholly of this grain.

Whether corn should be fed whole or as meal depends upon circumstances. If the kernels are so hard as to cause sore mouths, thereby preventing easy mastication, the grain should be ground. If no trouble arises from this source, the utility of grinding hinges on the relative cost of grain and grinding. We have seen that some grain is saved by reduction to meal, and the feeder can easily estimate whether he should incur the extra expense of grinding. Where grinding is not possible hard corn may be prepared for feeding by soaking the grains. Ear corn and shelled corn can be satisfactorily fed to fattening pigs upon a feeding floor of matched lumber, swept clean each day. Corn meal should always be soaked with water before feeding, the dry meal being unpalatable. Remembering that feeds in combination are better than the same feeds given singly, the prudent stockman will provide some complementary feed for pigs getting corn, even though the proportion of the secondary feed be small.

Consumers at home and abroad are calling for leaner pork, and the feeder should cater to market requirements. The demand can be met by using more protein-rich feeds, with less corn, during the growth of the pig, and especially by shortening the fattening period. Feeding the by-products of milling, oats, barley, or the waste products of the dairy, with corn, the fattening period not being unduly prolonged, produces pork which will easily meet the requirements of the most discriminating market.

Millions of barrels of mineral oil are now obtained yearly from the oil wells, and an enormous quantity of vegetable oil is produced from the cotton seed. The combined effect of these two articles is to limit the use of animal fats to the dining-table, while formerly they served for both lubricants and illuminants as well as for human food. The introduction and general use of the oils named has brought about one of the greatest economic changes of recent times. In this change we have an explanation of the low prices ruling for lard and tallow. Despite the low price for animal fats, consumers are calling for still less fat in pork, or at least a larger proportion of lean to fat. So long as oil can be secured from the earth and from the cotton seed, we cannot hope for high prices for lard or other animal fats. With these conditions confronting us, there seems no alternative but to produce more lean and less fat pork.

We have seen that wheat divides honors with corn in its ability to produce gain with pigs, and because it contains more protein and ash it comes nearer fulfilling the requirements for an all-around feed. Wheat is much superior to corn for young pigs and shoters. The flesh of wheat-fed pigs is considered very satisfactory, generally carrying less fat than from corn-fed animals. Because the grains are small and hard, wheat should always be reduced to meal before it is fed. Soaked wheat has proved unsatisfactory with many feeders. As we have seen, wheat and corn meal in combination give better gains than either separately.

As a feed for swine at all periods of their development, middlings stand pre-eminent. Because it contains much protein and ash and is not loaded with crude-fiber like bran, this feeding stuff is particularly suited to the nourishment of very young pigs, ranking next to the by-products of the dairy for that purpose.

DAIRY FORM.

We hear much said of dairy form nowadays and we are almost led to believe that good milking qualities cannot exist except in conjunction with the spare angular form supposed to be typical of the present-day dairy cow.

I have no wish to dispute long established truths, but I have had some experience that leads me to think that there are exceptions to this rule as to all others, and that the spare form is partly the result of feeding as well as being indicative of dairy character.

A cow that produces ten pounds of butter a week must be accounted a pretty fair producer and when she can do this for the greater part of the year we must accept her as a fair dairy animal, particularly when she does this without extra pampering of any sort, and a cow I once owned that did this was a pure-bred Jersey. I bought her from the people who raised her when her second calf was soon due. She was fat and in shape was very much inclined to the beef form, being square and blocky, and with the popular idea of the dairy form in mind I should not have selected her as a milker, but with the assurance of her owners of what she had done the previous season I felt safe to invest in her and I was never sorry, for with such a yield of butter as given above I found her very profitable, and later when after several years of ownership I sold her I was able to show such a record of her as found a ready purchaser at an

advance of ten dollars over the price I paid for her.

Nor was the milk and butter our only source of profits from her. I bred her to a Shorthorn the first year and she dropped a bull calf which after a few months of feed on separator milk brought me \$12, selling to a live-stock man to become a feeder later on. A cross between a Jersey and a Shorthorn may seem a violent one, but the first trial was so favorable that I repeated it every year I owned her, each year getting a dark red calf of beefy form that found ready buyers.

One calf, the only heifer, was kept and developed according to my ideas, and made as good a record with her first calf as the mother did, but whether she got to ten pounds of butter a week with the second calf I had no opportunity to learn, as I sold her just before coming fresh the second time and did not see her again.

A year after buying this "beefy" Jersey, a dark red cow was offered me by a man whom I knew to be reliable, with the assurance that I should find her the equal of my cows, which had a reputation as good milkers. I should have hesitated to buy, as she evidently was of a beef breed besides having the beef form, but my experience with the Jersey made me less skeptical in regard to her milking qualities that I might have been the year before and I added her to my herd. She was blocky and low down and bore every evidence of having descended from a line of beef-bred ani-

BLOODED STOCK for August—1908

mals, yet she had an udder which denoted milking quality, and I was never disappointed in her yield. Whether she was a "sport" or whether there were "milking Shorthorns" behind her I know not, but I do know her heifers had the same tendency to deep milking qualities and being fed so as to develop this tendency to the utmost they became valuable dairy animals.

My practice in feeding heifers from calfhood has been to give rations which would induce growth of bone and muscle, not withholding a generous supply of fat forming materials so that the little creatures were sym-

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WAIST HIGH

BLOODED STOCK for August—1908

metrical beauties. When they began to milk I still gave them enough of such food to keep them from becoming skinny, believing for the manufacture of the greatest supply of milk they were capable of producing they should be furnished the materials in their food and not be required to take it from their own bodies, and I believe if this method of feeding were more generally practiced there would be less tuberculosis among the dairy herds of the country.—D. C. Cornman in National Stockman and Farmer.

CONTRACTED FEET.

It might be well to look into the causes of contraction. We have mentioned the fact that inflammatory conditions were prolific causes, says a good authority on this subject. These inflammatory conditions may be brought about in many ways, by direct or indirect injury, concussion, etc. Then we may have atrophy of the frog, probably due to lack of frog pressure, diminished blood supply due to sluggish circulation, undue dryness of the wall, due a great many times to rasping the wall, removing the periople, which is nature's preparation for scaling the hoof, thereby preventing evaporation of the moisture contained therein. It is unnecessary to say more in regard to the cause of contraction, but let it be said that whatever the cause may be, it must be removed before repair begins.

Before going into the treatment, let us look for substance in a part of the skin. When removing the wall we notice on the upper part of the inner surface a groove known as the cuticular groove, which exactly fits over the coronary substance. All over the coronary substance we find little elevations and it is from these little elevations that the horn tubes grow, much the same as the hair grows on any part of the body. The wall is composed of a series of these little tubes, which are glued together with a sort of intertubular substance. Thus we have a solid wall. As the skin has a non-vascular insensitive and vascular sensitive layer (the wall) and its sensitive vascular layer (the sensitive lamina). The periople ring situated just beneath the coronary substance secretes the periople, a sort of varnishlike substance which covers the whole external surface of the wall.

The treatment after knowing the cause and the changes that have taken place in the structures involved is comparatively easy, but repair is slow. The cause must be removed, the dried structures must be given moisture, the frog given pressure, the inflammation reduced by fomentations, etc. By counter irritation at the coronet the circulation can be stimulated, thus stimulating growth. Hoof springs, judiciously applied, are useful in the majority of cases, but if the springs are too stiff they do not tend to relieve the condition, but retard the progress of repair by setting up a new inflammation or adding to the inflammation already existing. The same may be said of any of the appliances that expand the heels and keep them expanded.

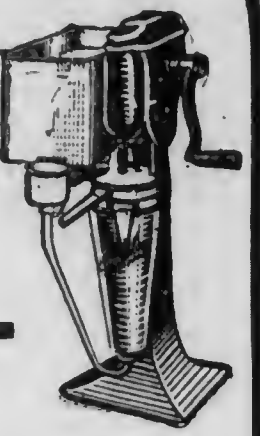
It is just as necessary for the heels to contract when the body weight is taken off the foot as it is for them to expand under body weight. Thus we see the necessity of exercise. It is no trouble to spread a foot, any one

can do it; but as our friend from Maine has said, "The cure might be worse than the disease. And he is right when he says, give nature a chance and start at the fountain head with remedies to assist nature. A run at grass would be ideal treatment, but unfortunately it is out of the question in the majority of cases. Let me here again call your attention to a statement of Dr. Skinner: "The coronary ring (substance) must not be injured." This was true in Dr. Skinner's day, and it is just as true to-day to say that it is the substance from which the wall grows is reason sufficient.

COOLING THE CREAM.

At once on finishing the separating, begin the cooling of the cream. The calves can wait a few minutes better than can the cream. There are devices made for cooling the cream as fast as it comes from the separator. These are good and can be made of much service is kept clean, but they add to the number of utensils that have to be washed and, like the strainer, they may be dispensed with. The dairyman should provide himself with enough cans, made after the old-style "Cooley" or "shot-gun" pattern; to hold the cream. A can of this kind holds from three to five gallons, is about 20 inches deep and nine inches in diameter. These cans are the best to keep the cream in at the farm. They are convenient to use and keep clean, and they present a large cooling surface, which is a great advantage in cooling cream. Set the pail or pails of cream in a tank of cold water and stir, testing

Little Thefts from the Dairy-man



The difference between the Tubular and "bucket bowl" separators is measured in hundredths of one per cent of butter fat which the Tubular saves and the "bucket bowls" let go into the skimmed milk. Hundredths of one per cent are hard to realize. Let's call it one ounce of butter fat lost each milking by a "bucket bowl," which

The Tubular Would Save

This would amount to 45 pounds of butter per year, worth at least \$11.25.

But will the Tubular make this saving over a "bucket bowl" separator—every "bucket bowl" separator? Will the Tubular prevent or stop this sort of little twice-a-day theft in my dairy?

We're ready to stand the cost of a tryout and proof. Write for Catalogue No. 300 then tell us how many cows you have, and how you now dispose of the milk. Then we'll tell you and prove to you what the Tubular can do for you.

THE SHARPLES SEPARATOR COMPANY,

West Chester, Penna.
Toronto, Can. Chicago, Ill.
San Francisco, Calif.

AMERICAN FENCE

Our Special Hard--Stiff--Springy--LIVE Steel

The development of American Fence. The years of experimenting. The hundreds of thousands of dollars which we have invested in perfecting machinery and producing the grade of special steel to make American Fence what it is today.



That is a long story. What vitally interests you is the result of this great outlay of time and money. What you want to know is that:—We have succeeded in producing a special steel that is perfectly adaptable for fence making. By the use of this special steel, galvanized by our perfected process, the value of

AMERICAN FENCE

to the user is greatly increased. We firmly believe it to be as near absolute perfection as possible for the purpose. Wire drawn from the steel is hard but not brittle. It is stiff and springy but pliable enough to be properly applied. It is live steel—not dead steel. So that every wire in American Fence as now made is a live wire, doing business all the time and—Always absolutely reliable against emergencies. Dealers everywhere—one in your town. See him—examine the different styles—test—compare—and judge the merits of the fence.

American Steel & Wire Co.,
Chicago New York Denver
San Francisco

Your Profits Are Cut

At FOUR Points by ABORTION

1. You Lose Calves, thus preventing a natural increase in your herd.
2. You Lose Milk, a direct money loss.
3. You Lose Cows, for an unprofitable cow must be disposed of, or she eats her head off, a loss in either case.
4. You Lose Time and Labor in caring for a diseased cow, besides running the risk of infecting the entire herd.

You can stop all this loss by stamping out the disease with Dr. David Roberts' Anti-Abortion Serum Treatment. You can administer the treatment yourself.

This is what Dr. A. S. Alexander, of the Wisconsin Experimental Station says in reply to an inquiry in regard to the Roberts' Treatment for Abortion: "I must confess that I cannot prescribe anything for contagious abortion that gives as good results as those obtained from the use of Dr. David Roberts' Anti-Abortion Serum, which to my knowledge has succeeded where thorough application of an antiseptic treatment advised by me had failed to stay or prevent the disease. His other remedies are also reliable and worthy of extended use by stockmen."

Your herd may be infected with abortion without showing positive symptoms. If there is a falling off in the flow of milk or in the quality. If your cows are run down or are out of condition, you ought to examine them and make tests for Abortion. Even if they are in apparent good condition, one or more of them may have the germ of contagious abortion in the system. It will cost you nothing to find out if your cows are affected, and the sooner you make the test the more you will save in time and money.

Ask for "The Practical Home Veterinarian." It tells all about abortion; how to detect it and how to stamp it out. It's FREE. This book is the published results of Dr. David Roberts' twenty years' experiments and veterinary experience with the disease of Abortion. It is a \$1.00 cloth bound book. Cut out the coupon below and send it today with 10c postage. If you send at once we will put you on the free list of "The Cattle Specialist," a monthly live stock journal.

A Positive Guarantee We guarantee to wipe out the germs of contagious Abortion in every case where Dr. Roberts' Anti-Abortion Serum is used as directed in "The Practical Home Veterinarian." In case of failure we return the cost of treatment. A public recognition of Dr. Roberts' thoroughness and eminence as a veterinarian was his recent appointment as State Veterinarian of Wisconsin, one of the greatest dairy states. The fact that hundreds of herds have been successfully treated—not one unsuccesfully—tells why we can guarantee the treatment. Send the Free Book Coupon while you have it in mind. The book is a complete guide in treating all live stock diseases.

Dr. David Roberts Veterinary Co., 72 Grand Ave., Waukesha, Wis.

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Town..... State.....
FREE the "Practical Home Veterinarian." I enclose 10c for postage.

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Also send "The Cattle Specialist" FREE for one year.

the temperature with a thermometer until the cream is as cold as the water. This is imperative success is to be obtained. As with the wiping of the cows' udders, this is a matter of a few extra minutes, but it will be a factor in deciding success or failure. The stirring rod and the thermometer should be considered as indispensable as the crank on the separator, and yet hardly one in five hundred farmers of the West has a thermometer that can be used for this purpose. If the can of cream is set in a tank of water and left without stirring, it will be hours before it becomes thoroughly cool. In the meantime the germs which have gotten into it in spite of the greatest care, have been multiplying at a tremendous rate and the cream goes to the station spoiled. At the temperature of ordinary well water the development of the germs is very slow, and for this reason no time should be lost in cooling the cream to this temperature. The thermometer is absolutely the only means by which one can tell whether the cream is fully cooled or not. By stirring and testing with the thermometer the task of cooling will be found to be short, and one will finish with the satisfaction of knowing that the cream is cool. It ought to be cooled down to 60 degrees F. If the water is cold enough to carry the cream lower so much the better. —Ed. H. Webster, Chief of Dairy Department, Washington, D. C.

PROFITABLE COWS AND PROFITABLE FEEDING.

In order to be a profitable cow the heifer should produce at least 5,000 pounds of 5 per cent milk with her first calf, says Prof. Trueman of Connecticut Experiment Station. Five thousand pounds containing 5 per cent fat will give 250 pounds of butterfat, which at 30 cents per pound will give an income of \$75. It will cost \$60 to \$65 to feed the heifer for one year, leaving a \$10 profit in cream sold, to which should be added at least \$8 for value of skimmed milk.

The second year the total profit should increase to \$30 or more. The heifer that will give 5,000 pounds the first year should give pretty close to 6,000 the second year. It must be noted that this yield is very much above the average, and that therefore the average heifer is not a paying proposition. The farmer must spend much care in selecting his cows and in getting a valuable sire, in order that these results may be obtained.

It should be noted that market prices have been charged for all feed eaten, hay, silage and milk. This feed was produced on the farm, and the farmer has sold it to the heifer at a profit over cost of production. Therefore, he has made some money even when the cost of feed for the year has fully equaled the return from the cow. The extra profits in the dairy business come from keeping the heavy producing cows and selling enough product from them to much more than pay for food consumed.

The proper feeding of the mature cow is of great importance. It is not a good business policy to feed less food than the cows can use to advantage. It takes a certain percentage of the food eaten to keep up the physical system and do the work of digestion and assimilation. It is only

the excess over what the cow needs for this work that can be used to return a profit to her owner.

Liberal feeding is the key to success in milk production. The high price of grains should not cause a cut in the cow's rations, but should call for a heavier feeding in order to get proper returns for the amount necessary to keep in operation her vital forces. It is not every cow that will respond to this treatment by adding to her milk flow. This is not a reason for cutting down her feed, but should call for her removal from the herd. Her place is on the butcher's block. The following rations are suggested as being suitable for a 1,000-pound cow, when fresh:

- 35 pounds corn silage.
- 12 pounds clover hay.
- 2 pounds cornmeal.
- 2 pounds wheat bran.
- 2 pounds gluten meal.
- 2 pounds cottonseed-meal, or
- 20 pounds mixed hay.
- 2 pounds wheat bran.
- 4 pounds cornmeal.
- 2 pounds cottonseed meal.

This gives eight pounds of grain per day and is about as much as may be fed with profit to a cow that does not give more than 30 pounds. A cow giving 40 pounds of milk per day will make good use of 10 or even 12 pounds per day.

A good method of feeding is to give one-half of the grain ration in the morning, and as soon as this is eaten to give all the clover hay that will be eaten up clean inside of an hour. Clover hay should always be used when it can be obtained, mixed timothy and clover next in value, and clear timothy is poorest. The clover will cut down the grain bill and should be always grown in this state. Twenty pounds of clover and five pounds of grain per day would be as valuable as 20 pounds of grain.

After giving the cows all they will

eat in the morning they may be left to rest and "chew the cud" until 3 or 4 o'clock in the afternoon, when the remainder of the day's rations may be given. This makes only two feeding periods per day, although the cows really have two feeds during each period. Some feeders prefer to feed hay at noon. This does not seem necessary if the cows have received all they want in the morning, and is more than likely to be a waste of feed.

Cutaway Tools for Large Hay Crops

Clark's Reversible Bush and Hog Plow. Cuts a track 5 ft. wide, 1 ft. deep. Will plow a new cut forest. His double action Cutaway Harrow keeps land true. Moves 18,000 tons of earth. Cuts 30 acres per day.



Jointed pole takes all weight off horses and keeps their heels away from the disks.

A WONDERFUL INVENTION



Clark's Double Action Combined Cultivator and Harrow

can be used to cultivate rowed crops, as a listing harrow, also when closed together is a harrow cutting 4-12 feet wide

CUTAWAY HARROW CO.,
6 Main Street, - Higganum, Conn.

Do You Want a Happy Medium

I have the best of this strain to be found in the U. S. Have stock of all ages. Show animals and herd-headers. Write me your needs.

J. H. YARNALL,

Kelton, Pa

For Valuable Information

About Your Poultry Read

THE WORLD'S FOREMOST POULTRY MAGAZINE

A postal addressed to the Reliable Poultry Journal, Box 35, Quincy, Illinois, brings a sample copy by return mail. If you inclose this ad. we will send you the Reliable to Aug., 1909, for 50 cents, commencing this month. No other poultry paper can give you this value.

A record of the daily milk yield should always be kept, not only for the purpose of knowing what each cow produces, but in order to know her daily condition and how much feed she ought to have. The milk sheet will reveal the condition of the cow quicker than anything else. As long as she eats well and the milk yield increases rapidly, the more feed may be given. The place to stop increasing the feed will be shown by the slow increase in milk yield.

SELLING HORSES.

It is not the province of this paper to lay down a set of rules for selling horses, or to hand out pointers on horse-trading, says the American Sportsman. These are matters which more properly belong to horse owners, and those who are engaged in the business of buying and selling. But a recent correspondent asks us the following question: "How is the best way to sell a horse?" In all seriousness we should say that the best way to sell a horse is to advertise.

But our correspondent evidently wants some further information along the line of selling horses, and while we lay claim to no great amount of ability in horse salesmanship, there are just a few things required in selling horses about which this correspondent may not be informed. One of the first things a man who has a horse for sale should get fixed in his mind, is that he must not delude himself into the belief that he owns the one and only horse in the world, and overlook the fact that last year there were just 19,476,583 horses in the United States, among them being several pretty fair ones.

There used to be a saying that "truth crushed to earth will rise again—if it doesn't get flattened in a horse trade," but there is no reason why the truth should be flattened out in selling or trading horses. The day has passed for exaggeration, and the safest plan is to tell the truth about your horse. There are probably a few people who will doubt this statement, and be inclined to sneer at the idea of always telling the truth in a horse deal, and we think we know a few fellows who have had good success as liars in horse sales; but telling the truth will sell more horses satisfactorily than any other plan we know of.

There are a lot of people who are seldom able to sell a horse simply because, just the minute a man comes along who wants to buy a horse they at once put a prohibitive price on the horse they have for sale. They will let it be known that they will take \$1,500 for a certain horse and as soon as a buyer comes, who is known to be willing to pay a fair price for a horse which suits him, Mr. Seller at once springs the price to \$3,000. Then when the buyer goes away without buying, in a few weeks he offers to sell the horse for \$1,500, and the buyer becomes suspicious and refuses to buy at any price, and this man very likely would have bought the horse if he had been priced right at the start.

The best time to sell a horse is when you are offered a fair price for him; and what is meant by a fair price, is a price which gives the seller a fair profit on his investment, and puts the horse in the hands of the buyer at a figure which enables him also to make something on his invest-

ment. The man who buys a horse of you, and the horse makes good, will come back when he wants another horse, and thus a permanent and regular customer is made for the horses you breed. There are some horsemen who, when they sell a horse to a man at a fair profit, and the horse makes good money for his new owner, attempt to make the customer pay an unreasonable price the next time he wants to buy.

The most successful horse salesman in this country has always tried to sell his customers a horse at a price which enables the customers to make money, and no one is more delighted than he is when a horse he has sold is re-sold at a big advance over the figure he received.

Only a few months ago this man sold a horse to a prominent horseman for \$1,250, and some weeks later the horse was sold by his new owner for \$2,500, and the man was simply delighted, and told all of his friends of the advanced price the horse brought. There are many other things which could be mentioned regarding the sale of horses, and while there is no set rule to follow, the only safe plan to pursue is to place a fair price on the horse you have for sale, and tell the truth about him.

WESTERN SETTLERS FACING TROUBLE.

In the West they are very much stirred up over the proposition to take from the unreserved, unappropriated public domain reserved for settlers a vast area of 300,000,000 acres and place it in the forest service and lease it out for fencing and grazing for the big cattle barons and others whose interests are being crowded by encroachments of the homesteaders.

This would shut out settlers from a pretty big strip of country—well, equivalent to an area 200 miles wide and over 2,000 miles long. This land is not included in the lands concerned in the regulation of streams or conservation of timber supply. This vast area has never been included in

the forest reserves; it is part of the public domain awaiting settlement.

The agricultural lands of the public domain belong not to the people of the West alone; they belong to the citizens of every State in the Union. Anybody may go out there, take up a homestead of 160 acres, and make a home in the manner the law specifies.

The act of June 4, 1897, which set aside timbered areas and mountain watersheds for forest reserves specifically and distinctly forbade the including of lands good only for other purposes. The idea was that the interest of the settler should have first consideration. Land unavailable for timber protection or reforestation or for conserving the flow of streams was to be kept open for farms and homes and communities.

Under the proposed "leasing policy" any big cattle magnate may lease and fence up for ten years as much as 10,000 acres; his friend may lease next door to him 10,000 acres more, and another friend the next, and so on.

It is not likely that any settler would care to undertake the responsibility of taking a family upon a homestead within such inclosure; his life would be a sultry one at best.

But the settler is not likely to have this opportunity, for if the leasehold has had one penny over \$100 spent on it by the cattle owner (which amount is easily covered by the fence) the lessee has a right to debar the settler from entering.

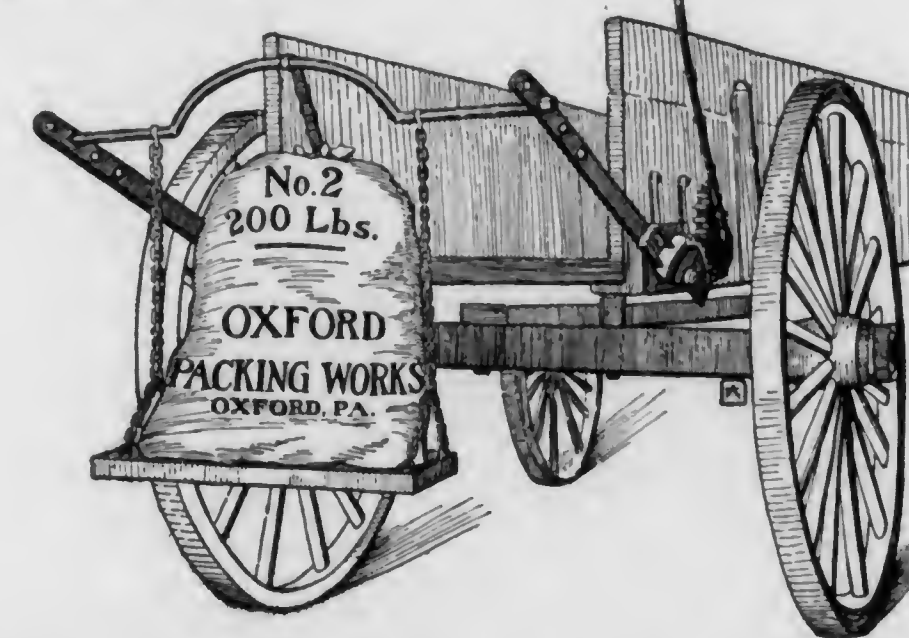
This movement is, in effect, a plan to "corner" the forage of and withdraw from settlement a domain larger than the combined areas of Ohio, Indiana, Illinois, New York, all of the New England States, and nearly all of the Southern States.—St. Louis Globe-Democrat.

We do not sympathize with those who sell their choice fat chickens to the huckster and eat fat pork and tough beefsteak the year round.

Look out, the mites are eating your hens up while you sleep.

Greatest Invention of the Age

It loads Potatoes, Grain, Stones, Etc.
It saves your back—cost low.
If you don't buy it you pay for it any how—in help
Send for circular.



Simplex Wagon Loader Co., OXFORD, PA.

CAPONS FOR PROFIT.

In the Philadelphia markets in March fancy capons were quoted at 35 cents per pound.

There is always a pre-eminent object in departing from the ordinary, and caponizing has this object. The wise farmer looking to assured future profit, sees far more weight in the steer than the bull. Castration makes the wonderful increase, and in just the same proportion does this apply to the cock and capon. In poultry raising, as in all other enterprises, the most successful results from certain lines are aimed at and it is over the threshold of this highly important point that the capon has stepped, opening up certainties never before dreamed of by the most sanguine. "What shall we do with our cockerels?" has ever been a perplexing question to the poultry raiser, as, in a great many settings hatched, the male predominates. Chasing about the yard, worrying the hens, continually spoiling for a fight, and cutting all kinds of capers in general, the cockerel loses his flesh almost as rapidly as gained, displays a voracious appetite, and in the end proves the cost of keeping to be far more than the price he brings in the market. This is very discouraging to the poultry raiser, and after a careful figuring of accounts he considers the "game hardly worth the candle."

In caponizing all these troubles are swept away—the erstwhile fighting cockerel becomes as docile as a chick. Instead of chasing about the yard he keeps his own company and spends each day in quiet living. Without the drawback of physical exertion the flesh rapidly increases, the bones add weight, and where under the old way a farmer would kill an ordinary looking cockerel of but little weight, he now dresses for market a bird rivaling the turkey in size and weight, whose flesh in flavor is superior to that of the spring broiler and as tender and juicy. Caponizing solves the problem of disposing of a large number of cockerels to the dealer.

The better a good article becomes known the greater the demand, and capons are no exception to this rule. It seems impossible to meet this demand. As the practice of caponizing grows and as the birds come to market in greater numbers, in greater proportion the demand increases. In February and March it is hard to find a capon in the market. This should not be, particularly when it is possible to have them at any time in the year, and, when the supply falls far short just at the time when it would seem the other poultry could take the place of them, this conclusively shows what a field is open to the capon raiser. February and March is the season of the year when most capons are placed on the market, and yet it is hard to find them there. The reason is quite obvious—they are caught up at once at large prices. Ordinary chicken meat has no show with a capon. The public is fast learning this fact, and where a capon is to be had, no other fowl will suffice. This causes all far-seeing poultry raisers to put on their thinking caps, with the result that they at once begin to cater to this demand, increasing their income 100 per cent. thereby. The field is open to everyone. You can do it. Have you tried?

There are numerous styles of tables on which to caponize, but experience in this matter places our choice between two only.

The top of the ordinary barrel meets all requirements, as a barrel admits of the bird being easily secured, brings the bird to the proper height with the operator, in brief, makes as good a table as can be desired. It costs nothing, there is always an empty barrel lying around or one that can be easily emptied. For those, therefore, who do not propose caponizing on an extensive scale we will recommend the top of a barrel, which method is used, makes it a point to have plenty of sunlight and the table so situated the light will strike squarely on the fowl. The question is often asked, how are capons to be fed? The answer is easily given. After caponizing give the bird all he will eat, soft feed, and let him have plenty of water. Caponized fowls generally begin to eat almost immediately after the operation has been performed and no one would think for a moment that a radical change had been made in their nature. Now leave the bird to himself, as for the time being he is his own doctor. It is well to look him over two or three days after the operation, as in breathing the air sometimes gets in under the skin, causing wind puff or a slight swelling. Simply prick the skin at the sides with a sharp needle, gently pressing at the same time and the air will be expelled and the capon relieved. Within ten days from the operation it will be difficult to find where the incisions were made. A day or two after caponizing the bird should be allowed to run at large, treating him just the same as any poultry would be treated. My first advice would be to keep cool and make haste slowly. If you are rather too tender hearted read the directions over carefully and then try your hand on a dead fowl. All surgeons do this in the first place and probably it would be as well for you to follow their example. Have plenty of light; it is impossible to perform the operation unless you have this. Do not get nervous; you are not giving the bird one-half as much pain as you are giving yourself uneasiness. Have your instruments all in readiness, secure the bird properly, make the incision, insert the spreader, pick open the thin like skin covering the bowels and go into the operation with your thoughts entirely on it and not on the bird. After your first performance of caponizing you will be surprised with its simplicity, and instead of being a learner you will find you have learned a lesson. Be very particular that your instruments are first class, as the market is already flooded with cheap and worthless caponizing instruments. It surely must be that such unscrupulous dealers are blind to the fact that it is practically impossible to sell the second set in the same locality unless they are satisfied to make all they can out of the first deal. Always keep your instruments in perfect order. Before using the knife see that the edge is sharp and that the other tools are as they should be. After beginning the operation of caponizing there should be nothing to hinder you from going right ahead. Use plenty of good sense;—this is an indispensable quality on any point. After caponizing once or probably twice you

BLOODED STOCK for August—1908

are a learner no longer, but a master of the situation. There is no reason why every one who reads this should not be able to caponize properly. To this end we have made it as simple as possible and yet at the same time sufficiently explicit and exhaustive. We feel confident that you will have solved the cockerel question if you will follow carefully the foregoing suggestions.—Charles J. Pilling.

WANT ALFALFA FED CATTLE.

When a train load of cattle sold in Omaha a few weeks ago for \$20,000, being exactly \$8 per hundred pounds for every steer on board, the buyers for the South Omaha packing houses said: "They were among the finest ever brought to this market and were fattened on a mixture of corn and alfalfa."

The great packers have recognized that the alfalfa fed cattle are of superior quality and are doing all that they can to encourage feeders to mix the great proteid food with corn in such proportion as will enable the stock to utilize all the carbohydrates and oil in the corn. These they cannot use without waste unless a protein ration is given as a neutralizer.

To encourage feeders to take up the balanced ration as the best for cattle, the packers are to have exhibits at the National Corn Exposition to be held in Omaha next December, and will show in the cuts of meat the superiority of that from alfalfa-corn fed steers. It will be one of the most interesting exhibits ever shown at an exposition and the expense will be entirely paid by the packers.

HOTEL RICHMOND
17th and H Streets
WASHINGTON, D. C.

100 Rooms, 50 Private Baths, American Plan
\$3. Day, Upwards; with Bath \$1. Additional
European Plan, \$1.50 Per Day, Upwards;
With Bath, \$1. Additional



A high-class hotel, conducted for your comfort. Remodeled, furnished through out. Directly on car line. Union Station 20 minutes, Capitol, 20 minutes. Shops and Theatres, 10 minutes. Two blocks to White House and executive Buildings. Opposite Metropolitan Club.

Summer Season July to October
Wayside Inn and Cottages. Lake Luzerne N. Y. in the Adirondacks. Switzerland of America. 45 minutes from Saratoga.
Send for Booklet

CLIFFORD M. LEWIS, PROP

BLOODED STOCK for August—1908

HOG CHOLERA

The Hog Worm is the Most Dangerous Foe of the Hog

In almost every outbreak of cholera you will find hogs very wormy. They get a hog out of condition and unthrifty. Then it is an easy prey to disease. The Snoddy Remedy will destroy every character of a hog worm. Even the liver and lung worms, which are the most dangerous, are easily destroyed with the Snoddy Remedy. Ten cents worth of the Snoddy Remedy will clear out the worms and purify the blood of a hundred pound shoat, so that he will be worth one dollar or more in a few weeks than he would have gained without this remedy. Can't you afford to invest ten cents per head to make your shoats worth a dollar per head more than they will without this little investment. Then why waste time and feed on wormy, runty hogs when it is easy to have them thrifty.

It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

THE SNODDY REMEDY CO., Box 290, ALTON, ILL.

IMPORTANT TO DAIRY INTERESTS.

Some of our readers may not be aware of the fact that oleomargarine or butterine is classed as a meat food product, and therefore comes under federal inspection. Regulation 18, B. A. 1., order 150, reads as follows:

Trade labels. Section 1. Upon each can, pot, tin, canvas, or other receptacle or covering containing any meat or meat food product, which meat or meat food product does not bear the marks "Inspected and passed," there shall be securely affixed under supervision of a department employe, a trade label before such meat or meat food product leaves an official establishment. This trade label shall contain, in plain letters and figures of uniform size, the words "U. S. inspected and passed," the number of the official establishment at which the meat or meat food product is last processed, and the true name of the meat or meat food product contained in such package. The words "under the act of congress of June 30, 1906," may be placed upon the label after the words "U. S. inspected and passed." An inspector shall not allow trade labels to be affixed until he is satisfied that the contents of the package are sound, healthful, wholesome, and fit for human food, in accordance with the statements on the label.

The bureau of animal industry has served notice that the wrapper or true container of oleomargarine or butterine (classed as a meat food product) must be marked as provided by the above regulation on and after July 1, next.

Some establishments which perate under federal inspection are preparing and shipping oleomargarine or butterine in wrappers on which there is no reference to federal inspection. The proposed enforcement of the regulation is creating a good deal of opposition among oleo interests, and they have asked for a conference in Washington, June 25, for the purpose of opposing the enforcement of the above law. It is clearly evident that if the manufacturers of oleomargarine or butterine desire to sell their product for what it is, the words "U. S. inspected and passed," required on the wrapper of each individual package, would be an advertisement rather

er than a hindrance to the sale of this product. It is therefore apparent that the dealers in oleo are still endeavoring to find some loophole by which they will be able to sell their product for something other than what it really is, thereby deceiving the public.

It will be seen that this matter is a most important one to the dairymen and all others who desire honest dairy products. The matter demands immediate attention. All dairymen should therefore rally to the support of this measure and in no uncertain tones insist upon its strict enforcement. The friends of pure dairy products should lose no time in communicating with the department of agriculture, demanding that the present law regulating oleo be maintained and enforced.—Dairyman in Ind. Farmer.

FEEDING PIGS.

Men are divided in their opinion as to the advisability of feeding young pigs heavily between the time they are four or five weeks old and weaning time. When one has saved a off when that period is passed through. Such pigs are in ideal shape to acquire a good deal of their living on pasture during two or three months after weaning, though, as a rule, we believe that it pays to feed a little grain every day of a growing pig's life.

We do not adhere to or advocate any special mixture. Five parts ground corn, five parts middlings and one part tankage or oil meal will make an excellent slop for young pigs and we think it pays to mix it up about twelve hours before feeding. With such a mixture little harm can come from feeding all that the young pigs will clean up two or three times daily.

When such a plan as outlined above is carried out you will find that you have bouncing big pigs at weaning time, and there will be no dropping large average per sow we certainly think that it pays to feed, and that can only be done successfully when a creep is provided for the little pigs. They need something else besides corn, and while mill feeds are high in price, yet it will pay well to use them to some extent.

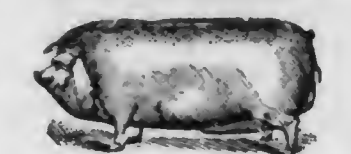
YOUR HORSE NEVER "AFRAID"

of trains, trolleys or automobiles if driven with a "Beery Bit," the only absolutely safe and humane bit made. "Four Bits in One." Quickly adjusted to suit any mouth. Write me today for trial offer and much valuable information.

Prof. B. S. Beery, Pleasant Hill, Ohio



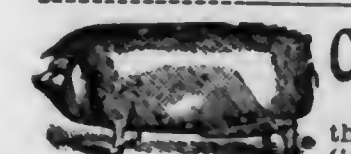
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Farmers and Breeders I now have a large stock, probably the best I ever owned, thoroughbred Poland-China and Chester White Pigs. 2 to 6 mos. old, sows bred, boars ready for service, all from prize winning stock. Guernsey and Jersey Cattle. Buff and Barred Plymouth K. Chickens.

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P. F. HAMILTON, Cockranville, Pa.

GRAIN FOR YOUNG PIGS.

In feeding grain to young pigs it is impossible to establish any set rules that will apply to all cases, under all conditions. In a general way I advocate rushing pigs, so as to finish them while they are yet young. Unless good pasture is very plentiful and grain expensive, I think there is good money in feeding the sow heavily while she is suckling her litter. The first three months of a pig's life is the time when the foundation is laid. I have found that a large sow with nine or ten pigs will eat about as much grain in a day as a cow, and there is good money in feeding her all she will eat. Of course, corn alone is not enough and unless it can be supplemented I certainly would advocate selling corn and buying shorts and possibly a little oil meal or tankage. I mix up a slop composed of five parts shorts, five parts cornmeal and one part tankage. I allow this to soak half a day. If plenty of it is fed, the pigs will fairly hustle right from the start. No hard and fast rules need be laid down as to what kind of grain or meal shall constitute the pig's ration. Where one has on hand a supply of oats, barley or corn these grains may be used to excellent advantage. The ration given is simply one of the many that might be compounded by any feeder in the corn belt. The main thing is to have something to supply flesh-making material. A creep should be made for the pigs when they are three or four weeks old. They will soon acquire the habit of using it. The slop mentioned may be fed to advantage in such a pen. The amount of tankage, oil-meal or shorts may be slightly varied. It is possible to get little pigs so fat that they make slower growth later. This should be avoided. They should be fed so as to keep them healthy and strong and in nice, straight condition. They will weigh from 150 to 200 pounds at six months, and if they do, there need be no difficulty in bringing them to 250 or 300 pounds by the time they are nine or at least to months old. When grain is very high and pasture plentiful, the plan of growing the frame first and fattening the hogs after they are a year old might be more practicable. Many farmers turn their fall shoats out to grass as early in the spring as possible, allowing them to get their living from the pasture during the summer, and as soon as new corn is ready in the fall grain feeding is begun and continued until they go to market. The argument is sometimes advanced that good growth is made on grass and a strong, healthy frame produced that readily takes on fat and that the gain thus made is cheap in comparison with corn-made pork. Then, too, many farmers have fed out all of the corn by spring, and are loth to buy more, so the shoats go to grass for the summer. There is some truth in these arguments, but it is not the best way to get the most money out of hogs. In the first place shoats will make no particular gain on grass alone. They will simply make a natural growth. Pasture land that is productive has a high value and should be used to the best advantage. Then, too, the hogs go to market in the fall when the bulk of the hog supply is marketed and the price is usually the

lowest of the year, because the supply is greater than the demand. Again, heavy hogs are not so much in demand as formerly and no longer bring the top price. There is no way in which a shoat can be made to gain so fast as by feeding corn or other grain in connection with grass. A little soaked corn fed daily while the shoats are on clover puts on weight at an astonishing rate and quickly puts the animal in marketable condition. No one kind of feed is as good fed alone as when combined with one or two others. Both grass and corn are natural and excellent hog feeds, but neither is as good alone. Corn makes fat very fast when the system is in a healthy, thrifty condition and nothing equals grass as a conditioner. —J. P. F., New York.

HINTS TO BEGINNERS.

One can scarcely pick up a poultry periodical that does not have some advice to people starting with poultry. Some may be good, some bad, and some indifferent. If many of the parties that write this would follow it themselves they would be better off. To begin with any kind of business one must have an object in view. The two objects that are foremost in most people's minds are money returns and success generally. Success is only obtained by a combination of honesty, energy, printer's ink and a first class quality of goods to back up your claims. In order to succeed you must have some ideas of your own, for no one can succeed in anything on other people's plans and ideas. One begins in the poultry business just as he would in any other kind of business—with capital and some ability. Both are needed. One may have plenty of money to carry on a business and yet have no ability necessary to succeed. Others have the ability but are minus the money. The poultry business offers a better chance to a person with ability minus the money than the man with money alone, for there are very few people but who can get a start in the poultry business. A very small outlay will give one a good start if they only have the patience to wait and grow up with the business. Some of the largest and most successful poultry breeders of today built up from a very small start as a side line.

Poultry is the greatest industry in the world that appeals to and is handled by everyone. It is not subject to trust methods. It will pay a large interest and does not necessitate a fortune to start with. All one needs is energy, ability, ability, thoroughbred poultry and a small patch of land. Start with an object, either eggs and fancy stock, meat and fancy or commercial poultry. The advantage of keeping thoroughbred stock is that you have two chances. They will lay more eggs even if sold for market eggs and you can advertise, sell breeding stock and eggs for hatching, and thus increase your profits. Begin to think for yourself when you begin to raise poultry. If you make a mistake find a way to avoid it and success is yours.—Mrs. B. F. W.

The separator has done more to make dairying profitable to the average farmer than any other one thing.

WHAT DOES IT COST A YEAR TO KEEP A HEN?

"What does it cost a year to keep a hen?" This was the conundrum propounded to the chairman of the Committee on Agriculture at Washington a few days ago. The congressman who asked the question was in a facetious mood, and the question was greeted with ripples of laughter. But it is no laughing matter to several millions of people in the United States. It is a more important question to the poultry keeper than the cost of our army and navy, the amount of the river and harbor bill, or even the fate of our foreign dependencies.

The Boston Herald took up the question, and offered three small prizes for the best answers. Many of the letters received were written in a jocular vein. But the three that were awarded prizes treated the matter seriously. The first prize was won by Robert A. Lynch, Malden, Mass., who keeps a flock of twenty-one White Plymouth Rock pullets, and who finds that it costs 4½ cents a week for each pullet, or \$2.21 a year. Mr. Lynch did not enter into details as to his method of feeding, but states that he keeps them on "good mized grain."

The second prize was won by Mrs. G. F. Merrill, of Hampton Falls, N. H., who entered much more fully into particulars. She says: "If you want a hen to lay eggs you have got to feed her well. My hens have laid well all winter. The following is what it costs to keep a hen a year: Oats, 58 cents; wheat, 39 cents; hen ration, 28 cents; cracked corn, 16 cents; cabbage, 4 cents, which makes

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a total of \$1.47." Mrs. Merrill states that the ration which she uses is that recommended by the Maine Experiment Station.

Levi Clark, of Waltham, Mass., finds that it costs him at the present prices for feed \$1.73 a year for each hen. Corn, wheat, oats and barley mixed are fed at the rate of four ounces a day. "Accessible at all times should be a hopper mixture of bran, middlings and corn meal, also green feed such as cut clover, alfalfa, cabbage or mangels. Animal food, such as cut bone or beef scraps, should be fed every other day." Mr. Clark makes the point that a hen may be kept alive for 80 cents a year, but if she is to lay generously it will cost for feed more than twice that. He also says: "A swill-fed hen produces eggs quite liberally for \$1.25 per year, but they are of the swill quality."

Putting these reports together and dividing by three, it will be seen that the average cost to these three poultrymen for feeding a hen is \$1.80 a year.

Corn is the cheapest thing we can feed.

Mixed feed, alfalfa and beef scraps, cost more than corn. So if there were no mitigating circumstances the cost of keeping a hen a year would be from \$1.75 to \$2.00, with the present price of feed.

But most of us are in a position where we can reduce the feed bill to a certain extent by the addition of table scraps, stable sweepings, waste vegetables, etc., to the ration. The farmer is the most fortunately circumstanced of all; for six months in the year his hens may range at large and need to be fed only a little corn night and morning. The other six months waste from the cellar and stable keep down the cost.

Let us now sum up what we have learned: It costs the average poultryman in the vicinity of \$1.50 a year to keep a hen. It costs the farmer not more than \$1.00—American Poultry Advocate.

THE GOOD CALF.

In calf growing there is nothing more operative against success than overfeeding. The dairy calf's digestive organization is not the strongest part of its anatomy, and it must be treated with care and good judgment. A wholesome hunger in the young calf is a good thing and indicates that he is making use of its feed and may safely have the ration reasonably increased. But it is well to remember always that the calf does not grow and develop by the feed actually eaten, but by the part that it digests and assimilates.

More feed than the calf can digest becomes a burden to the stomach and a danger to the digestion, not only involving the immediate good health of the calf but seriously impeding the calf's growth and thrift.

On the other hand, a chronic hunger is not desirable in calf development, and while steering clear of the danger of over-feeding we must not run aground in the shallows of under-feeding, for thus we may easily spoil the full usefulness of the good cow. The good cow is the animated organization of the vital parts of good feeds—"all flesh is grass." No feed, no cow; short feed, stunted calf; stunted calf, a cramped cow.

One thing necessary to a good cow is a large and fully developed stomach so that the cow has room to store enough feed to make a large quantity of milk.

I may add, incidentally, that, given this capacious storage capacity, it is the duty of the good feeder to see that the storage is well filled. Hence I like to begin early in the life of the calf to build the belly. The "pot belly" is cried out against as a bad sign in the calf, but if back of the "pot" is health and thrift I give myself no concern over the pot—I will make it a place of feed and work.

Pretty calves do not always make great cows, any more than pretty girls always make good wives, or sweet boys make wise men, so we can afford to cast aside too good looks in the calf if we know we are building wisely for the cow.

It would appear then that in calf feeding we have two dangers—the excess and the deficiency. The clear course between the two is the safe one, and to find this course and remain in it should be the intelligent study of the breeder. No man whose advice is worth following will presume to make a chart of this work to guide other men absolutely. He can only at best make suggestions—point the direction—and the actual work must fall on the man who feeds the calf—W. F. McSparran.

DAIRYING IN THE SOUTH.

To show what the South has to offer along dairy lines, we present herewith a report of our College dairy, which consists of two pure bred Jersey bulls, and 41 Jersey cows, all but six of which are grades. The report covers a period of nine months during which the average number of cows milked was 38. Following is a statement of receipts and expenditures:

Receipts.	
Cash	\$5.359
Eleven calves.....	175
Estimated value manure.....	880
Total.....	\$6.414
Expenditures.	
Concentrates	\$1.546
250 tons corn silage.....	500
25 tons corn stover.....	150
2 tons peavine hay.....	20
Labor	945
Ice	110
Estimated cost of fuel.....	90
Sundries	48

Total.....\$3.409
Balance in favor of dairy is \$3.005
Milk was sold in bulk at 25c per gallon; cream testing 20 per cent fat, at \$1.00 per gallon; butter at 35c per pound; and buttermilk at 15c per gallon. Most of the products were sold as milk and cream.

The cows received no pasturage whatever, which increased the expense for feed.

While only a nine months' record is presented here, these were by no means exceptional months. Indeed, we feel confident, from present indications, that the net earnings for the balance of the year will average higher than those for the period given here.

There is an unlimited market for dairy products in this state at the prices quoted above, especially for milk and cream. Milk retails at from

8c to 15c per quart, with an average of fully 10c per quart.

As to feed, there is no doubt whatever that a cow can be fed more cheaply here than in any of the leading dairy sections of the country.—John Michels, Professor Dairying N. C. A. & M. College.

SHEEP NOTES.

Sheep have a double advantage over other animals in that they give a return both in meat and wool.

Thrift in sheep is generally secured when people think enough of sheep to take care of them.

Much can be done to sustain the weight and quality of the fleece by generous and economical feeding.

To pay in the highest degree as a business, the sheep industry must contemplate making the most possible out of all the different products.

It is not the man who cures his sheep so much as the one who prevents their becoming sick who makes the most out of them.

In a mixed lot of sheep the best suffer by being sold with the inferior instead of the inferior being helped by the presence of the superior.

Real, live, up-to-date poultrymen and women are realizing more and more every day the advantages and increases in profit in catering to private trade, direct to the consumers. In this way you get the cash and larger margin and all the trade you can handle. Try it.

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MARYLAND DAIRY LAWS.

What That State Requires of the Dairyman.

Professor W. C. Mellick, of the Maryland Agricultural College, sends some "abstracts of laws and ordinances of Maryland" relating to the dairy industry and its regulation in that state. They are somewhat lengthy, but we hope that they be not passed by account of this objection, as they are sent us, and we are publishing them, with a view of advising dairymen as to what the trend of dairy legislation is and what the public is requiring of them. Legislation has a close relationship to the dairy business that must be reckoned with. The abstracts are as follows:

State Laws, 1898, Chapter 306.

20. It shall be the duty of all dairymen or herdsman or private individuals supplying milk to cities, towns and villages to register their herds of cattle with the live stock sanitary board, in violation of which the parties offending shall be fined not less than one dollar nor more than twenty dollars for each offence.

21. It shall be the duty of the live stock sanitary board to have inspected at least annually without notice to the owners or those in charge of any dairy or parties supplying milk where-in cows are kept, and if such premises are found in unsanitary condition, the said board may prohibit the sale and shipment of milk from such premises until such time as the premises shall conform to the following sanitary rules:

Rule 1. No building or shed shall be used for stabling cows for dairy purposes which is not well lighted and well ventilated, and which is not provided with sufficient feed trough or box and suitable floor laid with proper grades and channels to immediately carry off all drainage, and if a public sewer abuts the premises upon which such building is situated they shall be connected therewith whenever the inspector considers such sewer connection necessary.

Rule 2. No water closet, privy, cesspool, urinal, inhabited room or workshop shall be located within any building or shed used for stabling cows for dairy purposes or for the storage of milk or cream; nor shall any fowl, hog, sheep or goat be kept in any room used for such purposes.

Rule 3. It shall be the duty of each person using any premises for keeping cows for dairy purposes to keep such premises thoroughly clean and in good repair and well painted or whitewashed at all times.

Rule 4. It shall be the duty of each person using any premises for keeping cows for dairy purposes to cause the buildings in which cows are kept to be thoroughly cleaned and remove all dung from the premises, so as to prevent its accumulation in great quantities.

Rule 5. Any person using any premises for keeping cows for dairy purposes shall provide and use a sufficient number of receptacles made of non-absorbent materials for the reception, storage and delivery of milk, and shall cause them at all times to be cleaned and purified, and shall cause all milk to be removed without delay from the rooms in which cows are kept.

Rule 6. Every person keeping cows

for the production of milk for sale shall cause every such cow to be cleaned every day and to be properly fed and watered with abundance of pure clean water.

Rule 7. Any inclosure in which cows are kept shall be graded and drained so as to keep the surface reasonably dry; no garbage, fecal matter or similar matter shall be placed or allowed to remain in such inclosure unless sufficient straw or similar good absorbent materials be used to keep the inclosure clean at all times, and no open drains shall be allowed to run through it.

Any person who shall ship or sell milk contrary to the aforesaid order of said board shall be deemed guilty of misdemeanor and upon conviction shall be fined not less than one dollar nor more than twenty dollars for each day during which shipments shall be made after notice of such order.

Stables.

126. If any person having a cow or cows, horse or horses, in any stable within the city, shall keep the same in such manner that the filth and stench therefrom shall become offensive to or annoy any neighbor or other person, the person keeping such cow or horse, as aforesaid, shall forfeit and pay for each offense five dollars, and the further sum of five dollars for each and every day the nuisance shall be suffered to remain, notice having first been given to the party offending.

Health Department's Rules and Regulations.

1. Milk or cream shall not be kept for sale nor stored in any stable or room used for sleeping or domestic purposes, or in any room having any communication with such stable or rooms, or with water closet apartments.

2. Milk or cream must not be sold or stored in any room which is dark, poorly ventilated or dirty, or in which rubbish or useless material is allowed to accumulate, or where there are offensive odors.

3. Cans or other receptacles containing milk or cream for sale shall not be allowed to stand on the sidewalk or outside the store room.

4. Cans in which milk or cream is kept for sale shall be kept either in a milk tub, properly cooled, or in a clean ice box or refrigerator, in which only these or similar articles of food are stored, and the said milk or cream shall be kept at a temperature not more than 50 degrees F.

5. The vessels which contain milk or cream while on sale must be so protected by suitable covers and must be so placed in the store or dairy that the milk or cream will not become contaminated by street dust and dirt.

6. All cans, bottles and other receptacles in which milk or cream is handled, transported, or sold, must be thoroughly cleansed and sterilized by steam or hot water before filling. Such cleansing must be done in accordance with Section 1 of these Rules and Regulations.

7. All dippers, measures and other utensils used in handling milk or cream must be kept clean and sanitary while in use, and shall be thoroughly washed and sterilized directly after each day's use.

8. The ice box, or ice tub, or refrigerator in which milk or cream is

BLOODED STOCK for August—1908

kept must be thoroughly cleaned by scrubbing at least twice a week.

9. The overflow pipe from the ice box or refrigerator in which the milk or cream is kept must not be connected directly with the drain pipe or sewer, but must discharge into an open sink, which is supplied with water, sewer connected, and properly trapped, or which discharges upon the surface of the ground; or else it must discharge into a movable receptacle, which shall be kept clean and free from odors.

10. Any person having a contagious disease, or caring for or coming in contact with any person having a contagious disease, shall not handle milk.

11. All cases of infectious or contagious disease within the premises where milk or cream is sold or stored must be reported to the Health Officers at once.

12. In selling milk, the contents of the can or other receptacle should be thoroughly mixed before measuring out the amount desired.

13. Ice must not be placed in the milk or cream to cool it.

14. In testing milk by dealers samples must be removed from the receptacles containing the milk, and if the samples are tasted or if the fingers are put into the milk, or in any other way be subjected to the possibility of being contaminated, the samples must be thrown away and not put back into the milk containers or sold.

FITTING CATTLE FOR THE SHOWS.

If pastures are good, they, with the addition of some bran, chopped wheat and oats, will do until two months before the show. Then take cattle in and begin the real fitting. If you have darkened box stalls let each show animal have one and be sure you keep out all flies and other annoying features. Light blankets made of bur-lap will serve to keep flies away and thus add comfort to the cattle. As soon as animals are taken up give them a good bath, using plenty of water and soap. Tar soap makes a good lather and leaves the hair in good condition. The feeding now should be closely watched so that all possible gains can be made without

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getting the animal off feed. Feed three times a day, say 6 a. m., noon and 6 at night. For roughage, feed alfalfa hay, green corn and sorghum, if the last two can be had. If the animal is a calf, it should receive mother's milk and the milk of a nurse cow, for milk is the best food for the young growing animal.

For grain, nothing is better than corn, but as this food is so high priced here, a mixture of chopped wheat, bran and ground barley may be used. Variety is relished by cattle so don't make them sick of one food. Animals should never be over-fed but should always be looking for their meals. Begin the grain feeding gradually and get it up to 10 pounds, to 15 pounds per 1,000 pounds live weight, several weeks before the show. When on full feed, miss one feed per week, say Sunday at noon, as this will make animals relish food more and also gives them a rest. If under the forced feeding, the animals refuse a meal or two, don't be alarmed, but let them fast for a day or so, by which time they will generally begin to feed all right.

Be sure the feed boxes are well cleaned and that nothing is allowed to sour around the stalls, for this is the greatest cause of cattle going off feed. The feces of animals should be watched by the feeder as they are the best index to conditions. When cattle are feeding right the feces should not be hard, nor so soft that they will run, but should be in a semi-solid condition so that they have some shape and appear to have a membrane surrounding them. If animals get too loose use more oats and not so much green food in the ration.

The coat of hair and skin needs considerable attention from the first. Give a bath often and do considerable brushing every day. Do not use curry comb, except to get manure off, as the harsh comb breaks the hair. Each animal should have from one-half to an hour's brushing per day, as this makes the skin pliable, gives a gloss to the hair and keeps the animal clean. If the animal is Hereford, Galloway or Shorthorn, the hair is generally roughened or curled, which is done by wetting down the animal and then lightly currying against the hair (against the grain) which curls it and gives the desired roughened appearance. This roughening of the hair covers up many defects and makes the animal appear blockier. This curling should be done often during the last two months before showing as the continual work along this line makes the hair more curly.

The horns of animals require much attention, and only an expert can fix them correctly. Several things are needed before one can go to work on horns, among them being a spoke shave, a wood rasp, a steel scraper, about three by four inches, several grades of sand paper, some metal polish and flannel rags. With the spoke shave take off the rough outer horn and thin the horns down some, then by the aid of the wood rasp and sand paper they can be smoothed up. Now, by the use of the scraper, the smoothing is continued, working from the base of the horn outward. When thoroughly smooth the polish is given by the application of metal polish, which is rubbed in with soft rags. Some whitening also may be used in this final polishing. Do not be

afraid of doing too much here, as generally it takes hours to make the horns presentable.

Cattle hoofs can be trimmed by the use of a chisel and mallet and on large farms regular stocks are built in which animals are held. If animals are quiet the hoofs can be made neater by marking, while animal stands on a plank floor.

Still with all the feeding, currying and polishing, which has been described if the animal does not know how to stand before the judge, not much is gained. Begin early teaching cattle to lead and to stand squarely upon their feet when the signal is given and thus you will be able to show them to advantage.

There are more tricks in the show yard business than in anything short of horse-trading, and this article, though not written to explain them, may give some idea of the great care necessary to prepare cattle for showing.—Prof. Jno. T. Caine in Desert Farmer.

MILK FLOUR.

The Department of Agriculture at Washington is investigating a new discovery which promises to be of much importance, especially to dairy farmers. It is that of manufacturing flour from milk. It is said that the apparatus has been perfected by which milk can be reduced to a pow-

der, which is not sensitive to heat and other conditions which vitally affect milk in its natural state. It is estimated that the cost of producing this milk flour will be about 25 cents per 100 quarts, and flour from skimmed milk will probably be sold at 12½ cents per pound. Converted into flour, skim milk will have an added value. The secret by which milk flour is manufactured has not yet been made public. It is an altogether different product from any of the milk products now on the market. The new manufacture will be shipped in tins, bags and barrels.

You can tell just as soon as there is anything the matter with one of your birds by the comb. The natural color is a bright red and any variation from this means trouble. Give the flock some good condition powder once in a while whether they need it or not. It will prove a good investment.

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A good Brooder is as necessary to success in raising Chicks as an incubator is in hatching them. In fact, it's more important, because no matter how many you hatch you'll make no money if you don't raise 'em. This Brooder will make that part of the work easy and sure. It is large and roomy—six feet long, three feet wide, three feet high in front, two in the rear. It is constructed of the best material, yet is built light so that it will be easy to handle and move about, and reduce the freight. To make "United" Colony Brooders of lighter lumber, and at the same time make them stronger and better than others, we cover them all over with our celebrated Lone Star Roofing. This costs more than lumber, but it also makes a nicer Brooder, makes it light, and absolutely wind and frost proof.

Colony Brooder No. 24

is divided into two large compartments, each 3x3 feet. In the first compartment is the Hover, leaving plenty of room outside the Hover for the chicks to run about the room which is heated by the escaping heat from the Hover. There are two features about this Brooder which you will find in no other. With it, when your chicks become too large for the Hover, you simply remove it without disjoining any pipes, and without disarranging any parts of the Brooder. And when you desire to remove the chicks to other quarters, all you have to do to get it ready for another brood is simply to set back the top of the Hover. To convert into a ground-floor Colony-house, simply remove the roof—you can do it alone—reach down and raise the floor out without taking Brooder apart in the least—replace roof, and it's ready. Nothing could be simpler than this Brooder, and it's really less bother than looking after an old hen or two. We'll make you a special price on the Brooder delivered, freight paid, east of the Mississippi River, or allow freight to the River on all orders west. Don't buy until you get our price. Write today. Ask for Catalog 16.

United Incubator & Poultry Supply Manufacturing Co.,
26-28 Vesey Street, NEW YORK CITY

GOOD DAIRY BARN.

Our producers of certified milk are setting good examples in the dairy barns they are building. In most cases these barns represent the carrying out of the best-matured plans for the comfort and health of the cows and the protection of the milk against contamination. These barns are for the most part the very opposite of what we find on too many farms where dairying is largely carried on.

In the first place, it is found on investigation that each barn is located at a spot where the drainage is good. This prevents the drainage from the barn yard becoming breeding places of disease. The air drainage is also good, and no groves of trees are allowed to shut off the winds that, especially in summer, should have a clean sweep. These winds increase the comfort of the cows and constantly carry off any odors that may have been created in the vicinity of the cow stables.

The first thing that has been provided for has been the health of the cows. This must be the chief point in the scheme of housing dairy cattle. This is becoming an increasingly important matter on account of the spread of tuberculosis, which finds its best breeding grounds in dark and ill-ventilated cow stables, where the same air has to be breathed over and over again.

The more impure the air becomes the more germs will it contain and the greater will be the chances for the cows to become infected with the germs of disease. To give a stable

so well ventilated that the cows will be always breathing pure air is to set an obstacle in the way of the spread of this most terrible disease. Already, in some of our states, 10 per cent of the cows are affected by tuberculosis, according to reports of the State boards of health.

The new dairy barns are of one story and their ventilation is therefore easy. There are no building obstacles to the placing of the flues where they will do the most good. In mild days in the fall, winter and spring, the many windows can be thrown open and a complete change of air secured in a few minutes.

It would take a long time to get the foul air out of some of our old-fashioned barns, where the hay is piled above the heads of the cattle on scaffolds and opposite to the cattle in deep mows. The small door and window or two would then not let out the impure air as fast as the cows could contaminate it in their process of breathing.

The ability to change air quickly and frequently means a great deal, added to the ability of the cows to throw off disease germs that may come to them. This increase of ability to resist disease is the direct result of the constant reception by the cows of all the oxygen they can use.

It makes a great deal of difference to a cow whether she receives 100 per cent of all the oxygen she can utilize or whether she receives only a fraction of what she can utilize. It makes a difference with her disease resisting power and it ultimately makes a difference with her milk-producing

power. The changing of food into milk is a complicated process and one depending largely on the supply of oxygen to the blood.—Bulletin Department of Agriculture.

HORSE SENSE REMINDERS.

Don't leave me hitched in my stall at night with a big cob right where I must lie down. I am tired and can't select a smooth place.

Don't compel me to eat more salt than I want by mixing it with my oats. I know better than any other animal how much I need.

Don't think because I go free under the whip I don't get tired. You would move, too, if under the whip.

Don't think because I am a horse that weeds and briars won't hurt my hay.

Don't whip me when I get frightened along the road, or I will expect it next time and maybe make trouble.

Don't trot me uphill, for I have to carry you and buggy and myself, too. Try it yourself some time. Run uphill with a big load.

It is unprofitable to feed poultry and get no returns for food and labor, but it is invariably the fault of the poultryman and not the poultry. One must study the necessary varieties of feed to be a successful feeder in any kind of feeding. You feed your stock that which does them the most good and should feed the hens that which will produce the most eggs.

A. R. O. WORK.

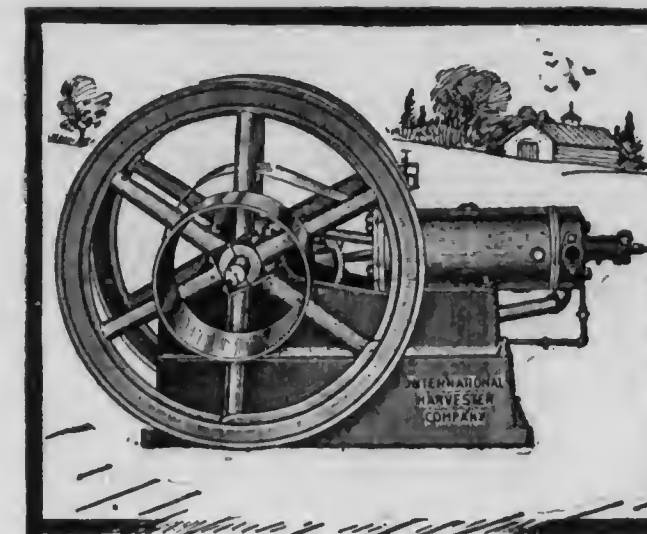
I am glad to be able to state that the official year just closed has proved the most successful yet passed for the Advanced Registry work of this Association. The increase in the work over the year before was about 13 per cent; the total increase during the three years of my incumbency of this office being nearly 100 per cent. That is, the breeders of Holstein-Friesian cattle are doing practically twice as much official test work as they were doing three years ago. The proportion of breeders beginning this work during the past year has been greater than ever before; and the success with which they have met has so pleased them, that they are among the most enthusiastic supporters of the Advanced Registry system. Besides the satisfaction they gain by proving the capacity of their cows, they find it pays from a money point of view; for even the owners of grade herds are now demanding Advanced Registry sires for the heading of their herds.

During the past official year our breeders have had 2,055 cows under test for periods of not less than seven days. Of these 2,055 cows whose records were reported, 47 began their records not less than eight months after calving; while 14 of them made semi-official yearly records. Of the 1,994 ordinary records reported, 72 were extended to 14 days, and 173 to 30 days.

Considered as a single herd, these 1,994 animals of all ages, of which nearly one-half were heifers with first or second calves, produced in seven consecutive days 784,393.2 pounds of milk containing 27,131.428 pounds of butter-fat; thus showing an average of 3.46 per cent fat. Each animal produced an average of 393.3 pounds of milk containing 13.607 lbs. butter-fat; equivalent to 56.2 pounds or 27 quarts of milk per day, and 157½ pounds of the best commercial butter per week. Figures are sometimes tiresome; but the Advanced Registry office deals wholly in figures, and in no other way can we so effectually set forth the wonderful merits of our magnificent breed of dairy cattle.—Malcolm H. Gardner, Supt. of Advanced Registry. From the address delivered at the annual Holstein-Friesian meeting.

YARDING.

We quite often see some article on fowls doing better when confined in small yards than when let run at large. This don't seem to go down with me somehow. I can't just tell why, but it sticks somewhere. It is impossible for one to make hens lay any better than they do in the spring of the year when they run at large and get anything and everything to eat. However, if you shut the same bunch up you will soon see a decrease in the egg yield, no matter how good you care for them, and the eggs will cost you more money to produce when stock is yarded. I remember reading an article some years ago on yarding and free ranging birds for profit and the writer gave a very bright explanation of why yarding was the best and the one I (Yng) struck me the most in this article was the statement that birds running on free and unlimited range would sometimes get so busy in their pursuit of worms and bugs that they



A Reliable Power as a Farm Help

established a new order of things. Any one who will carefully consider the matter must see that they are money makers and money savers.

They make short, easy, pleasant work of what always has been hard, slow work. They save the farmer's strength, save him wages of hired men, save time, and enable him to do more work and make more money out of his farm than ever was possible before.

There is no doubt that on the average farm an I. H. C. gasoline engine will more than repay its first cost each year. The nice adaptation of these engines to all farm duties is one of their most excellent features.

They are built in:—
VERTICAL, 2 and 3-Horse Power.
HORIZONTAL (Stationary and Portable), 4, 6, 8, 10, 12, 15 and 20-Horse Power.

TRACTION, 10, 12, 15 and 20 Horse Power.
AIR COOLED, 1 Horse Power.
Also sawing, spraying and pumping outfits.

There is an I. H. C. engine for every purpose. It will be to your interest to investigate these dependable, efficient engines. Call on the International local agent and get catalogues and particulars, or write the home office.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
(Incorporated)

would forget to lay. I thought at the time, and do yet, that this statement was the most ridiculous statement for any intelligent person to make that I ever heard. This man either never had birds on free range or he did not know what he was talking about. I am firmly convinced that herein is the cause of more failures than any one obstacle that breeders have to contend with. One gets the hen fever and at once proceeds to try and keep 250 hens when he should only have 50, and the results are not what they should be, and possibly this sized bunch is in a very small pen where the ground is as dry, hard and bare as the floor of a house, without any shade and with the same bill of fare the year round, until one is disgusted and sells out to the butcher and forever condemns the hen business. Look around and see if you don't see just such circumstances as this in your own neighborhood.

FOR SALE OR EXCHANGE. Only Two Cents a Word.

All classified. Each initial or number counted as one word. No advertisement taken for less than 25 cents each issue. All replies must be sent direct to advertisers. Cash covering the exact number of words at 2 cents each must be sent with every order. This Department for Live Stock Only.

CATTLE.

JERSEYS—Combination and Golden Lad. For sale—10 cows, 10 heifers and 20 bulls. S. E. NIVIN, Landenberg, Pa.

PURE-BRED Holstein Bull Calf. Eligible for registration. Also high-grade bull calf. MADISON COOPER, 101 Court, Watertown, N. Y.

FOUR High-bred Registered Bull Calves, from 6 weeks old up to 1 yr., at farmers' prices. For full description and pedigree address S. F. WILLIAMS, Canton, Pa.

HOGS.

FOR SALE—Some fine Yorkshire Pigs—no better stock in U. S. Just imported—new blood. A. A. BRADLEY, Frewsbury, N. Y.

Prices right; Hogs right—Large English Berkshire and Large Bone Poland-China Hogs—Anything from 8 weeks to teated sows and boars ready for service. Write your wants. GUS BRUNNER, Sunman, Ind.

REGISTERED Duroc Swine, Bred Sows \$13. Stock of all ages for sale. WM. HARSHMAN, Thurmont, Md.

REGISTERED Duroc Jersey Hogs for sale at panic prices. Beautiful gilts bred to farrow this month and next. April pigs. Address ROBINSON BROS., Myers, Ky.

MISCELLANEOUS.

HORSES Going Blind, Barry Co Iowa City, Ia., can cure

WANTED—30 Dorset Ewes, young and good quality. State number and price. Address P. P. GHEEN, Willow Grove, Pa.

POLAND CHINAS

With size, bone and quality. Boars of Spring 1907 farrow, Summer gilts and September pigs at prices to match the times. Write for circular. A. F. SIEFKER, Defiance, Mo.

Back of the Bank Book

Is the "Tubular" Cream Separator

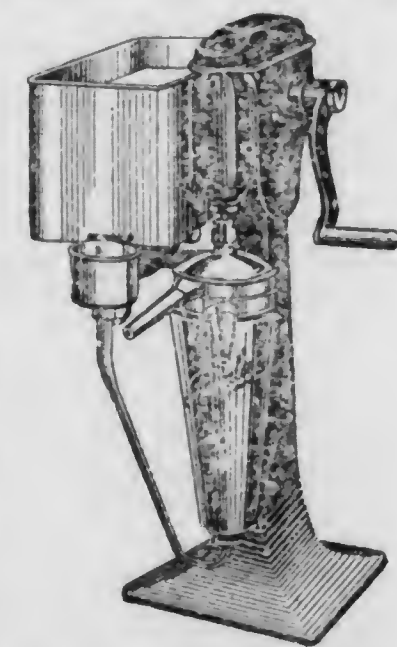
EVERY dollar of the farmers' and dairymen's money in the banks of this country represents hard labor and wise economy. It represents head work as well as hand work. But it is a fact that the farmers and dairymen whose balances in the bank are the biggest are not always the men who work the hardest with their hands—nor even the ones who farm the most acres or milk the most cows. They are mostly the men who make every move count by employing the latest appliances and the most economical methods in their work. They are the men who make mind master over muscle. Much of their wealth is therefore the result of economy—the saving of what others waste. This means that they are always figuring on how to increase profits without increasing expenses. The first question with such men, when considering the purchase of a new machine is, not how much will it cost, but, **what will it do?** Will it save anything which now goes to waste? Will it do this profitably? That's the test we ask you to apply to the "Tubular."



Saved Price in One Season.
GUTHRIEVALE, KAN., June 13, 1907.
I can sell my butter to customers where I never could sell it before getting the separator. We milk six cows and it will make more than enough butter extra to pay for the machine in this one season.
LAURA L. TURNER.

Twice as Much Cream.
PINE BLUFFS WYO., May 14, 1907.
We got twice as much cream as we did skimming by hand. Tubulars soon pay for themselves.
MRS. W. G. RUSSELL.

Twice as Much Butter.
KAW, OKLAHOMA, April 24, 1907.
Make about twice as much butter from seven cows, and of a better quality, than we did without it.
MRS. MABELLA.



The Best by Every Test

We ask you to apply this test because it will be to your interest to do so. If the "Tubular" will increase your profits without increasing your expenses you ought to have it. It will. It will make every cow you milk earn more money. That's why we want to put a "Tubular" back of your bank book. Thousands of farmers and dairymen testify to the merits of our machines. They say the "Tubular" pays for itself in a short time. When it has paid for itself all that it saves is clear profit for there's no expense—it won't cost you a dollar a year for repairs. We've built it so that it can't.

If you are economically inclined; if you want to save money and increase your bank account here's your chance. Our valuable book, "Business Dairying" will show you how, and our latest catalog tells all about the "Tubular." We'll send them both free if you will write today, ask for book No. 300.

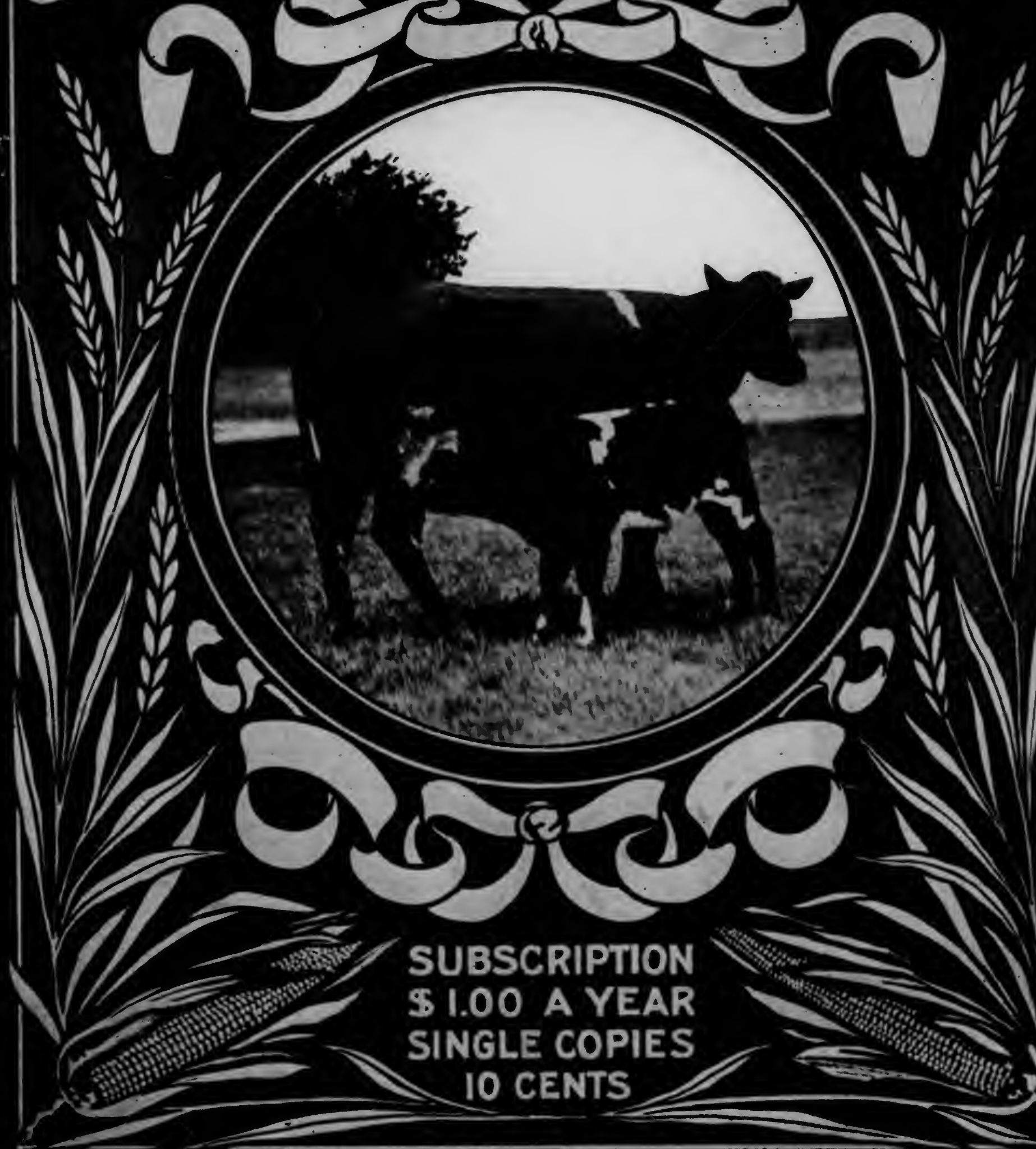
The Sharples Separator Co.,

Toronto, Canada

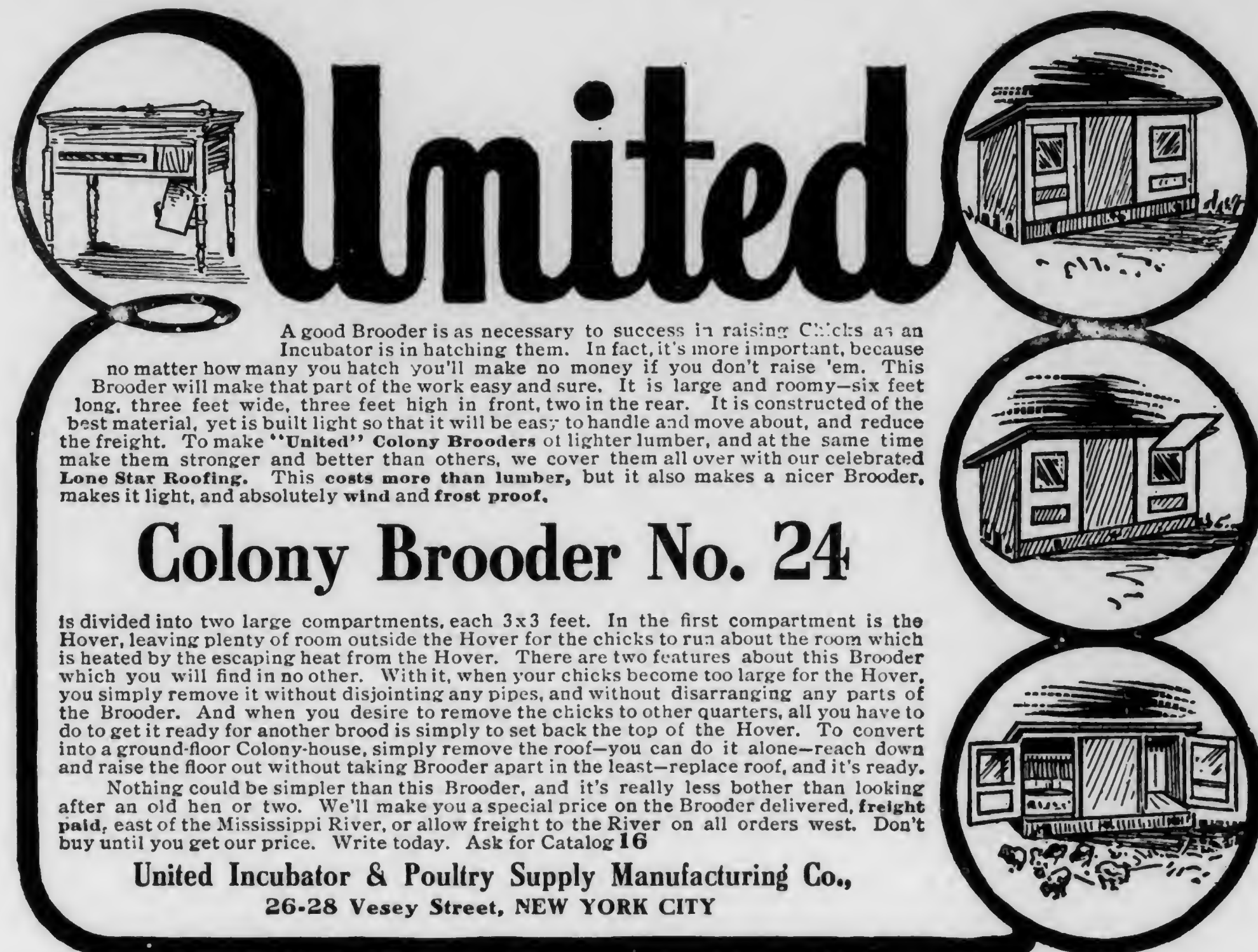
WEST CHESTER, PA.
San Francisco, Calif.

Chicago, Illinois

BLOODED STOCK



**SUBSCRIPTION
\$1.00 A YEAR
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10 CENTS**



United

A good Brooder is as necessary to success in raising Chickens as an Incubator is in hatching them. In fact, it's more important, because no matter how many you hatch you'll make no money if you don't raise 'em. This Brooder will make that part of the work easy and sure. It is large and roomy—six feet long, three feet wide, three feet high in front, two in the rear. It is constructed of the best material, yet is built light so that it will be easy to handle and move about, and reduce the freight. To make "United" Colony Brooders of lighter lumber, and at the same time make them stronger and better than others, we cover them all over with our celebrated Lone Star Roofing. This costs more than lumber, but it also makes a nicer Brooder, makes it light, and absolutely wind and frost proof.

Colony Brooder No. 24

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United Incubator & Poultry Supply Manufacturing Co.,
26-28 Vesey Street, NEW YORK CITY

HOG PASTURE.

Plenty of good pasture is necessary in successful swine-raising. Small lots are not profitable unless there are enough to allow frequent changes. In such cases the cost of fence usually over-balances the profit. It is generally claimed that one acre of good red clover will pasture ten hogs during the season. My experience shows that this is not a safe rule to follow. Much depends upon the season. Red clover is the best grass for hog pasture, with one exception—alfalfa. It takes nearly two years for alfalfa to become well established, but it will stand for several years.

Preparations for hog pastures should begin a year before it will be needed, especially if seeding to clover to be retained for two or three years. If the first season should be wet, the trampling by the pigs would probably ruin the clover. I once sowed a field to winter rye in the fall. The next spring I went over it with a slant-tooth harrow, and put on red clover at the rate of ten quarts to the acre, following with two harrowings. On May 15th, I turned 15 sows with their pigs, 120 all told, into the field. The season was favorable, the rye furnished abundant pasture, and there was a fine stand of clover, but it was necessary to take the hogs off in August or they would have destroyed it. As it was, it was a fine clover pasture for two years. In another instance the season was wet, and the hogs destroyed the clover by trampling it out. In this case I should have harvested the rye instead of pasturing it. Timothy makes a poor hog pasture. Oat stubble will give the most

pasture for the present season, if sown to Dwarf Essex rape. If sown broadcast, use five pounds to the acre. If you can divide the field with a low, moveable wire, so as to give the rape, when partly eaten down, a chance to start again, it will be better. Don't turn hogs into rape until it is 10 to 12 inches high. You may, as an experiment, sow four quarts of clover to the acre with the rape, but do not sow rape until there seems to be no danger of hard frosts. Kentucky blue grass makes good pasture for sows and their litters in April, May and parts of June, and also in the fall. Parts of the farm that are not cultivated, such as timber-lots or creek-bottoms, may be seeded with it. To get quick and temporary pasture, rye and oats, or oats and barley, sown together answer well. The use of the moveable fence has brought about the possibility of great economy and profit, in pastures. Such fences will last, with reasonable care, half a man's lifetime. For artichokes, prepare the land as for potatoes, mark the rows three feet apart, and at least three inches deep. Drop the bulbs two feet apart, cover and cultivate as with potatoes. In October turn hogs in or dig them yourself. They will throw out roots in every direction, filling the ground with small bulbs. They will not winter-kill. The next year the artichokes will grow as thickly as rag-weeds. If hogs harvest them, the land should be smoothed over as soon as they are taken out, and then cultivated as before. All successive crops will be of small tubers, and it will take several years to exterminate them. My advice is to go slowly in planting. I have known them to be-

come as much of a pest as the so-called wild artichokes.—J. P. F., New York.

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WASHINGTON, D. C.

100 Rooms, 50 Private Baths, American Plan
\$3. Day, Upwards; with Bath \$1. Additional
European Plan, \$1.50 Per Day, Upwards;
With Bath, \$1. Additional



A high-class hotel, erected for your comfort. Remodeled and finished through out. Directly on car line. Union Station 20 minutes, apt. 20 minutes. Shops and Treats, 10 minutes. Two blocks to White House and Executive Buildings. Opposite Metropolitan Club.

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BLOODED STOCK : SEPTEMBER, 1908

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ADVERTISING—For information and rates address Fisher Special Agency, New York, 150 Nassau Street, or write direct to the home office.

OUR PUBLICATION DAY is now the 15th of the month previous to date of issue. To insure insertion of ads. as desired, all changes in running ads. and new ads. must reach us by the 10th of the month previous to date of issue.

OUR ADVERTISERS—We believe that every advertisement in this paper is backed by a responsible person. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts.

EDITORIAL DEPARTMENT—The editors are always glad to examine manuscripts suitable for publication in this magazine. Photographers are invited to submit photographs of subjects pertaining to any phase of stock. Stamps should accompany both manuscripts and photographs to insure their return, if they are not accepted.

Published on the Twenty-fifth of each month preceding date of issue by
TIMES PUBLISHING COMPANY.

D. H. L. Patterson, President. C. E. Morrison, Secretary and Treasurer.

Entered at the Post-office at Oxford, Pa., as Second-Class Mail Matter, May 27, 1899.

We have redeemed our promises made to you during the past few months in this interesting number which is before you. As you examine it, page by page, you will not fail to find it bright and clean but something different from other farm papers.

This issue of Blooded Stock marks a new era in its life. Many changes, ups and downs, have marked its journey since the present editor started the paper several years ago on the farm as a means of disposing of the surplus of the farm. During all of this period it has been our cherished hope to some time be able to give our subscribers the best paper printed along pure bred live stock lines and the farms raising same. We wish to give our patrons interesting reports and illustrations of the great farms and animals to be found scattered over the country, along the with the best on other subjects that is of importance to the up-to-date business farmer. This is a big undertaking, but by the same loyal support given us heretofore by our subscribers, we will be able to well repay them for all favors granted, both in the past and future.

The subscription of Blooded Stock changes with this issue to \$1.00 per year. With this increase in the subscription rate we feel that we will be able to make such improvements as will fully warrant this increase. It is not our desire to take any unfair advantage of our readers, and with this end in view we will accept subscriptions at the old rate of 50 cents per year until January 1st, provided a two-year subscription is sent. In other words we will accept your subscription for two years for \$1.00 until January 1st, and after that date the rate will \$1.00 per year.

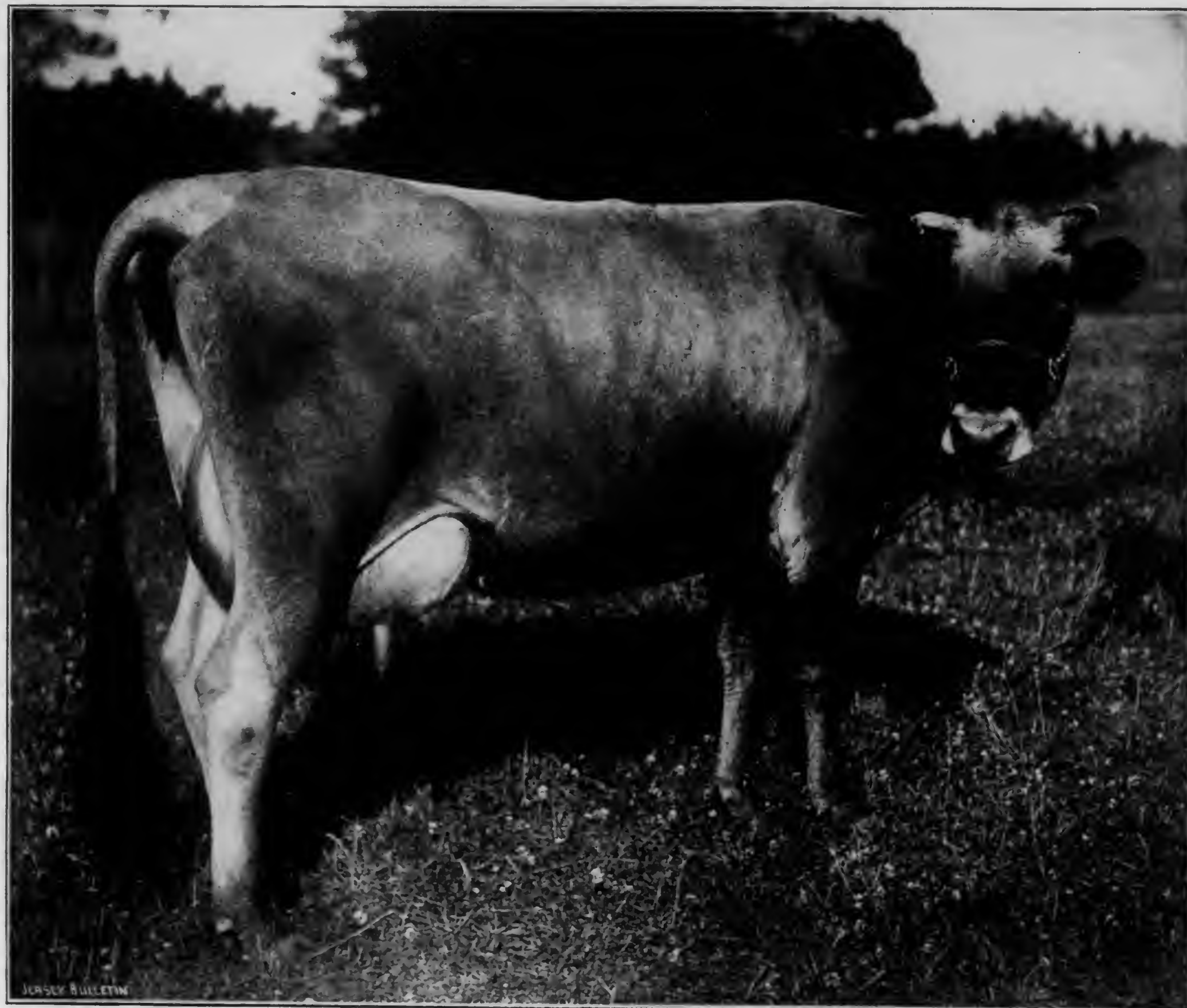
In each issue of our paper we will devote a few pages to the illustration of choice bred animals and stock farms, giving a description and history of same. Persons wishing to have their farms illustrated as shown in this issue will please write us so that we can make arrangements for this work. This department can be made a very interesting part of our paper with a little support from our subscribers. Please do not be backward about writing us.

A great many of our readers at times are able to give good advice on one subject or another pertaining to the farm and live stock, but feel backward about sending it to the publisher. We want our readers to send us any

and everything that they have along this line, no matter how short. The experiences and little items when put together are what makes a paper of interest. Send these little sketches along—we will appreciate it.

The general business condition all over the country is showing improvement. The crops, as reported by the Agricultural Department, are up to the average, and this will prove one of the great years for the farmer. Live stock breeders will find a ready market for their stock at good round prices. Probably not at the high water mark, but at figures that will prove profitable and above the average for the past ten years. There seems to be a great demand for the very highest type of breeding animals. The middle and lower grades are not so much sought after. As the grade of live stock improves the less the middle grade is called for, as every one has that class, and it is only the very tops that will produce improvements. Therefore it is only tops that breeders are in search of and these sell for as high prices as ever, if not greater. The more farmers keeping the common grades the more buyers there are for the tops. Therefore persons having strictly high class animals for sale can never use advertising space to better advantage than at the present time.

We wish to urge upon breeders who are making a business of selling pure bred live stock the necessity of a closer selection of the animals offered for sale to other buyers. As already has been stated the demand for tops and tops alone is increasing, because of the large numbers raising pure breeds of the middle class. Each of these farmers and breeders are looking for improvements and to make such improvement it is necessary for them to be able to buy better animals than they already have. The breeder who will aim high enough to be able to supply this demand will find a better market at better prices than he ever did before. The sooner they realize this the better it will be for all concerned. It is not a question of demand but one of quality that finds the buyer.



MERMAID'S MELIA ANN 180965.

Mermaid's Melia Ann 180965, Register of Merit No. 325, Class A; points scored, 97. Admitted on authenticated record of 18 lbs. 1 oz. fat from 402 lbs. 12 oz. milk in seven days. Age, four years, two months. She has milked 62 lbs. in one day. Her sire is the great pure St. Lambert bull, Melia Ann's Grandson 60469 (sire of seven tested daughters at seven years old). Her dam is the grand old cow, Mermaid of Glen Rouge 138006, test 22 lbs. 9 oz. from 339 lbs. milk in seven days, she a daughter of the celebrated Nellie of St. L. 69458, test 23 lbs. 12 oz. from 412

lbs. milk in seven days, 15,742 lbs. milk in one year, and is owned by Crawford Brothers, Lebanon, Kentucky.

Mermaid's Melia Ann is a cow of rare finish and wonderful capacity. When she is fully developed she will make the best of them look to their laurels. We have recently been offered \$1,000 for her by two different parties.

Her last calf is a fine bull, dropped May 6, 1908, by her sire, Melia Ann's Grandson. This is the greatest St. Lambert calf on the market for sale today, and any one wanting such breeding should write them at once.

STORAGE OF POTATOES.

In a community that produces many potatoes, storage houses become a necessity. In Colorado the underground or dugout storage house has proved the most successful. Potatoes stored in an ordinary storage room lose weight rapidly and soon become shriveled and of poor quality. The underground storage combines all the qualities for keeping potatoes in the best condition.

Possibly the most important requisite is to keep down the temperature of the cellar. These cellars should be built lengthwise with the currents of air so that in the fall when the potatoes are put in, a draft through the cellar can be established at night to carry off the heat brought in with the potatoes during the day. The practice is to

fill in the bins in layers of not more than one foot each day and let this layer cool down during the night. After the potatoes are all in, the ventilation is regulated so that the temperature is kept as near freezing point as possible without freezing the potatoes. This ventilation is necessary, not only to regulate the temperature, but to keep the air pure and dry. If the air becomes foul and damp, moulds will grow and dry rot or *Fusarium* will develop. Many potatoes are spoiled in the stores and in the store rooms of dwellings. The potatoes are stored near a furnace with more or less light. Before the sack or barrel is all used the potatoes become greened by light and are not only unwholesome, but to a certain extent, poisonous. —E. R. Bennet, Potato Specialist, Colorado Experiment Station, Fort Collins, Colo.

THE FAMOUS HOOD FARM AND HOOD FARM JERSEYS LOWELL, MASS.

IN order that we may give our readers some idea of the famous Hood Farm, we print below quotations from a speech delivered by Mr. C. I. Hood, proprietor of Hood Farm, at the Old Home Gathering in his native town of Chelsea, Vt. We also give pictures of some of the great Jerseys at Hood Farm and the cow stables. Mr. Hood said in part:

"One day in 1890, a real estate man told me that the property on which the main buildings of the Hood Farm are now located was to be sold at auction, and he thought I should buy it.

"My reply was that I had troubles enough and did not wish to add to them. But notwithstanding, I drove out to the farm about to be sold. I found it to be only about three miles from my home located on a high level plateau, the highest point between the cities of Lowell and Lawrence.

I was particularly pleased with the beautiful location, commanding as it did lovely views for miles around.

additions have been made until now Hood Farm comprises more than 1000 acres, situated in two towns, Andover and Tewksbury, and in two counties, Essex and Middlesex.

"I confess that in the beginning I did not dream of developing the extensive plant which may be found at Hood Farm today.

"Three years after the original purchase I became very much interested in the great dairy contest at the World's Fair in Chicago, and at the close of that contest Hood Farm owned five of the 25 cows in the competition, including Brown Bessie, that won the 30 and 90 days' butter test, and Merry Maiden, that won the grand sweepstakes as the best cow of all breeds contesting.

"From that time my interest in the dairy cow has continually been increasing. I am thoroughly convinced, and it has been conclusively proved, that the Jersey cow is the best for the dairy, and that the Berkshire is the best hog for all general purposes that can be raised on a farm.

"As proof of my interest and confidence in these breeds,



The Farm House and one of the Cow Barns at Hood Farm, Lowell, Mass.

"Mountains in Massachusetts and New Hampshire, many beautiful groves and thrifty farms, were included in the landscape, while from the west, adding wonderfully to the picture, sparkling in the sunlight, ran the beautiful Merrimack river, just leaving the busy mills of the city of Lowell, and flowing by the northern borders of the farm, until it was lost to view in the eastern hills between Lawrence and Haverhill.

"Old Indian legends, confirmed in part by relics which have since been found at the farm, gave a touch of romance to the locality.

"To make this part of my story short, I sent a man to the auction and through him made the first purchase of about 70 acres, of what has now become one of the most famous farms in the country, for Hood Farm is probably more widely known here and abroad than any other American farm.

"Extensive buildings have been constructed and frequent

I will say that today we have at Hood Farm about 350 Jerseys, and our herd of Berkshires average between two and three hundred animals.

"We cut about 300 tons of hay, and plant about 100 acres of corn, from which we harvest about 1000 tons of ensilage.

"Our cows are turned out every day, but our pasturage is limited, and we depend mainly upon soiling crops. These crops are usually barley, oats, millet, rye, wheat, hungarian, and peas, cut early while they are very succulent, and fed green.

"The revenue of the farm is derived from the sale of Jerseys and Berkshires, and from our milk, cream and butter.

"The milk and cream are sold in Lowell, and practically all of the butter goes to the Adams House in Boston.

"Our annual auction sales of Jerseys and Berkshires attract buyers from all over the country, and animals raised



Figgis 76106

out of the experience and necessities in maintaining the health of our great herds, are now extensively used by breeders and farmers throughout this country, as also in the Island of Jersey, in Great Britain, in Austria, as well as also in far-off Australia and New Zealand.

"We get ten cents a quart for our milk, and sixty cents a quart for forty per cent. cream.

"For Jerseys our prices range from \$50 to \$3500, and our best bulls, which are not for sale at any price, we value at from \$10,000 to \$25,000 each.

"For Berkshires the general prices range from \$10 to \$500. We priced our champion boar last year at \$5000.

"Until 1892 I gave little thought as to whether the farm proposition was remunerative or not. In that year, however, I resolved that Hood Farm must now be made to pay. The result has been that for the years 1904, 1905 and 1906, the figures have been on the right side of the balance sheet and show a good profit.

"From a material standpoint this seems to be about all there is to indicate my success as a farmer.

"But there is another, and I think a very much more important consideration, one which gives me the keenest satisfaction, and which is a source of continual encouragement to everyone associated with me in the management of Hood Farm and in the development of our favorite breeds.

"I refer to the fact (and I can say it without egotism) that Hood Farm has been a most important factor in improving the quality and raising the standard of the Jersey breed of cows throughout the country.

"We know beyond any possibility of doubt that the expense and the labor and the thought that have been devoted to the development of the Jersey cow at Hood Farm have contributed very largely to the improvement of the dairy cow of America. I can truly say this gives me far greater satisfaction than I could derive from any money return.

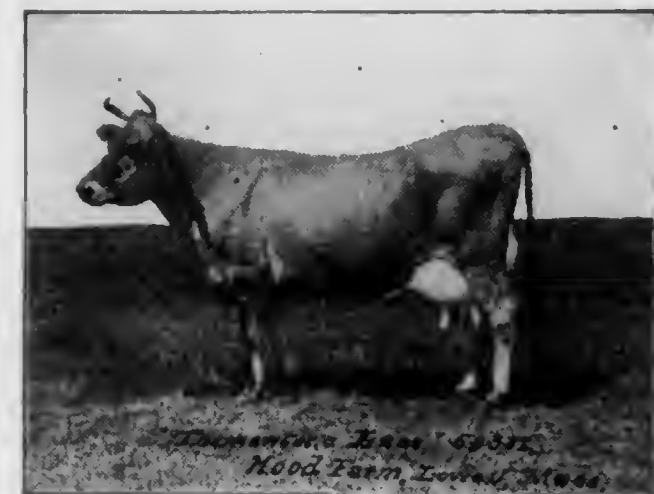
"Let me briefly refer to a few of the facts which form the basis of the satisfaction which we call our greatest recompense from Hood Farm:



Hood Farm Pogis 9th 55552

at Hood Farm may be found on the best farms, from Maine to California, and from the Dominion to Texas.

"Incidental to the management of the farm has developed our line of Hood Farm Remedies, which, growing



Tormentor's Lass 9532

petition ever held in the world. To breed eight heifer calves that sold at auction for over \$3000.

"To breed a cow that sold for \$3500.

"To stand at the head of the list in bulls entered in the Register of Merit of the American Jersey Cattle Club.

"To win at the great state fairs of New York, Michigan, Indiana, Ohio, Kentucky, Illinois and Missouri, in the years 1904-5-6, more than 600 ribbons, prizes, cups, medals, etc.

"To breed three of the 25 cows, almost one-eighth of the whole number, in the great 120 days' test at St. Louis.

"These are some of the facts that establish the phenomenal success of Hood Farm as a breeding institution.

"Two of our cows in the St. Louis contest exceeded in their return production the records of the winners, Brown Bessie and Merry Maiden, in the Chicago contest eleven years before, which clearly shows that we have been breeding up all the while.

"In the Berkshire department, at the same St. Louis fair, Hood Farm competed with men who had devoted their lives to the breeding and development of the Berkshire hog. Hood Farm was the second largest winner, actually beating, with only one exception, every one of those experienced breeders in the south and west.

"At times the competition took the phase of being the entire west against Hood Farm.

"You may be interested to know what profit in dollars and cents it is possible to derive from a single cow.

"Tonona 9th of Hood Farm is a

Jersey cow bred and raised at Hood Farm. She was born October 23, 1900. On January 15, 1903, when a little less than two years and three months old, she dropped her first calf, and during the subsequent year milked, under the rules of the authenticated test of the American Jersey Cattle Club, 8033 pounds and 12 ounces of milk, testing 532 pounds and 4 ounces of butter, thus winning the championship of the breed for authenticated test for one year of heifer with first calf.

"In the four years that she has been in milk she has given an aggregate of 25,286 pounds of milk, which at 8 cents a quart yielded \$1,050.72.

"In this time she had four calves, one of which died. The three that lived sold for \$250, \$1075 and \$400 respectively, making a total of \$1725. The cow herself was sold this summer for \$3500.

"Thus the aggregate received from this cow, her product and her progeny, was \$0276. Taking from this the probable expense of her living and care for five years and ten months that we owned her, and which might be estimated liberally at \$402, we have a net profit of this cow of \$5874.

"Of course, these are not everyday figures, but they represent an actual result attained at Hood Farm.

"I do not wish the young men here to get the idea that what I am telling about Hood Farm has been accomplished by any streak of luck. On the contrary, our success has been attained only by persistent hard work, by close

application of thought, by studying the latest methods, by constant experiment and by the greatest patience.

"There have been many disappointments and discouragements, but the obstacles have been overcome, and similar results may be achieved by any young men who will patiently and persistently put in the necessary study and labor.

"I know of no golden or easy road to success in farming or anything else. The only sure way to success is that which runs along the line of work, work, work.

Figgis 76106.

Dam of Hood Farm Pogis 9th. Entered in Register of Merit, Class A, and dam of two in Register of Merit. Cham-

pion and Grand Champion Cow at World's Fair, St. Louis, 1904. Test 19 lbs., 15 oz. from 329 lbs. 4 oz. milk; 50 lbs. milk one day. Gave 9181 lbs. 7 oz. milk in 7½ months that tested 547 lbs. 6 oz. butter.

Hood Farm Pogis 9th 55552.

Only bull in the world entered in Register of Merit, Class

NEW STYLE OF OLEOMARGARINE.

The ways of the adulterator of food products are manifold and his efforts to gain the co-operation of the so-called plain people are well calculated to deceive them by holding out promises of great gain and carefully concealing the hazards of the game.

For example, it is reported that the cottonseed people are now recommending that cottonseed oil be added to cream just before churning, "to improve the quality and increase the quantity of butter." It cannot be claimed that these men are ignorant of the fact that the resulting product of such a combination would be simply oleomargarine, instead of butter, and the persons who make or sell it become liable, under the revenue laws of the United States, to the payment of heavy special taxes—and if not paid promptly, to prosecution and payment of a penalty of not less than \$1,000. And more than this, if any coloring matter has been added to the oil or combined oil and cream, the resulting product must pay an internal revenue of 10 cents a pound.—Hoard's Dairyman.

PLAIN TALK AND GOOD TO HEED.

Mr. Valancy E. Fuller, editor of the Practical Dairyman, fired a broadside of hard sense into the recent meeting of the New England Holstein Breeders' Association. In referring to the low price of milk he claimed that the producer was largely responsible for it. He said, "How many men in this room can tell me what it costs to produce a hundred pounds of milk?" But four hands were up. Continuing, Mr. Fuller said: "If you do not know the cost of production, you are in no position to fix the price you should be paid for your milk. You are manufacturers. In every line of manufacturing the manufacturer knows not only what his completed product costs, but the cost of every part. He cuts out that which is unprofitable and

A, whose sire and dam are also entered. Son of Grand Champion Figgis. Has nine daughters in Register of Merit, including the World's Champion Yearly Test Heifer Figgis 20th of Hood Farm, 8182 lbs. milk, testing 557 lbs. 8 oz. butter.

Tormentor's Lass 59832.

Dam of Hood Farm Torono. Test 19 lbs. 8½ oz. five months after calving, from 383 lbs. 3 oz. milk. Gave in eight months 8528 lbs. milk, testing 527 lbs. 12 oz. butter. Two sons with tested daughters. By Imported Tormentor, sire of 47 in the list.

Hood Farm Torono 60326.

Son of Torono and the greatest lineal descendant of Tormentor. Sire of Merry Miss, champion yearly authenticated test cow in class, 11,152 lbs. of milk, testing 601 lbs. butter with first calf. Half brother to Tonona 9th of Hood Farm, ex-champion yearly authenticated test heifer, 8033 lbs. 4 oz. milk, testing 532 lbs. 4 oz. butter. Sold for \$3500.

CARRYING ALFALFA THROUGH WINTER.

Some parties recommended leaving the last growth of the season, which they say should be a foot high in the field, to catch the snow, as a winter protection. This is only theory—absolutely wrong, for while it is a benefit to the ground, it at the same time is a detriment, as it furnishes the best winter quarters for rodents and insects of all kinds, which are alfalfa's worst enemies, and may do irreparable damage in a field during winter. I prefer a clean field for the above reason.

If the growth is not sufficient to mow and rake up well, then pasture it down, always disk and harrow afterward to keep the surface loose. The very best winter protection is a liberal coat of good stable manure. This is far better than to leave a growth of several inches in the field, as it adds more plant food to the soil, besides the young alfalfa is too good a feed to let go to waste.



Interior view of Cow Barn at Hood Farm, Lowell, Mass. The first cow on the left is Grand Champion Figgis.

THE FARMERS HORSE

BY CARL W. GAY, IN CHARGE OF THE HORSE BREEDING FOR THE PENNSYLVANIA STATE LIVE STOCK SANITARY BOARD, HARRISBURG, BEFORE THE THIRTY-SEVENTH ANNUAL MEETING OF THE KANSAS STATE BOARD OF AGRICULTURE.

THE horse about which I am to talk today needs no introduction. He is one you all know, the draft horse. I want to discuss this subject from three points of view: First, What is the farmer's horse? Second, Why? Third, How is he best produced?

It has been very appropriately said that market horses are classified according to their jobs. Thus we find all market horses grouped in four great classes. In the first is the one whose job it is to furnish horse power to the packer's van or the jobber's dray; then there is another class, whose job is to haul some one who can afford to be

value. The market standard of weight in a draft horse is a ton, the minimum being 1600 pounds in condition. There are two reasons for this. First, weight insures efficiency in a draft horse by adding to the resources upon which he may call in the performance of his work; a light horse or team starts and moves its load by sheer muscular exertion and nerve force, while the heavy horse can accomplish much by his weight itself, making it possible for him to utilize his powers to the utmost. A light pair may possess all the power and courage necessary to move a load, but they lack the weight to hold them to their work and



Belgian Drafts, owned by Durham & Fletcher, Wayne, Ill.

hauled in luxurious vehicles; another class for the speed and road horse, and one for the different types of saddle horse. A horse's utility depends primarily upon his power of locomotion, and whether he is a draft or a speed horse depends upon whether he moves the mass of his body and and whatever is attached thereto with power or at a great pace. The basis for all market classification is utility; and when the consumer demands a horse of specified type it is because a horse of that particular type is best adapted to the line of service required. It is in no sense a matter of fad or fancy.

Hence we adopt the market specifications as our standard of what a draft horse should be. The first essential in this standard is weight, and it has been shown by market statistics that each and every pound which a horse weighs over 1400 pounds adds about 25 cents to his market

are consequently pulled to their knees at each effort.

When it is borne in mind that the draft horse, in his highest estate, is a city horse, moving enormous loads through crowded streets and over hard, slippery pavements, this second advantage of weight becomes apparent. Important as we have shown it to be, however, weight alone does not make a draft horse. There are good mechanical reasons why a horse must be set up, developed and proportioned in a definite way in order to best serve the purpose of a draft horse. The sum of these distinctive characteristics constitutes the type. One of the first things pertaining to the type that one should consider is lowsetness. The physical principles underlying the advantage of lowsetness is that "the nearer the center of gravity to the base of support the more stable the equilibrium favors power, while an equilibrium easily displaced is conducive

to speed. The length of limb is very largely determined by the length of cannon bone, and a short cannon bone insures better support below the knee. Furthermore, by the law of correlation of parts, the cannon bone becomes an index to the general proportions of the horse, and a short canon indicates a short, compact horse, while a long canon suggests a leggy, narrow, light-minded, loose-coupled individual. It is a fact that buyers for a certain purpose prefer a somewhat topky, upstanding horse to the squatty, extremely short-legged sort, but where power is the sole object in view the low set type prevails.

Breadth is the next of the type characteristics to note. "Wide as a wagon" is a common phrase descriptive of the draft horse ideal. The lateral dimension is chiefly a matter of the bony framework or skeleton, and its objects are twofold. First, power is the product of muscular activity, and the skeleton is the foundation upon which the muscular system is based; therefore ample foundation is necessary. Furthermore, the horse that stands wide has a greater base of support and great stability for power. Depth of rib together with the well sprung rib of a wide horse means heart, lung, and digestive capacity. Com-

in this respect is not altogether determined by the number of inches a horse measures below the knee, however. The character of the bone must be considered along with the mount. It is substance with quality, the most of the best, that is the ideal.

A horse of any type must have a good foot, but it happens that the foot of the draft horse goes wrong in one way, that of a roadster in an entirely different way. For that reason there is a particular form and texture of horn especially desirable in the foot of a draft horse. The tendency in this case seems to be toward a flat foot of shelly horn, while the contracted, deep heels with navicular disease, the common defects of the road horse's foot, are seldom encountered in horses of the draft type. What we should look for, then, in the draft horse, is a nice, full, round foot, with sufficient depth of heel and arch of sole to overcome the tendency to become flat, and a tough, dense horn.

There is one thing more essential to the typical draft horse and that is a good walk. On account of the fact that he does, or should do, his work at a walk, the value of a draft horse is much enhanced if he be a good walker.



Belgian Drafts, owned by Durham & Fletcher, Wayne, Ill.

compactness has already been referred to as a desirable attribute in the draft horse. In the first place, it insures concentration of power, "bunching hits," as it were. Then, in view of the fact that the seat of power is in the hind quarters while it is applied against the collar, the importance of a short back and close coupling is plain. Finally, that characteristic which best expresses power is massiveness. Massive appearance comes from muscular development. The muscle of power is short, thick and bulky, compared with the long, lithe, band-like muscle of speed. Therefore, the heavily muscled draft horse presents a massive appearance. In fact, for one word, massive is perhaps the most descriptive of any that could be applied to a draft horse or colt. Closely allied with massiveness is substance, of "bone," as the horsemen call it. There is sometimes such disproportionate development of bone and muscle that the contraction of the muscles may break the bones to which they are attached. If you are going to have this great muscular horse you must have sufficient "timber" under him. You do not want a draft horse superstructure with coach horse underpinning. Excellence

Three things which determine efficiency at this gait are length of stride to cover ground, directness in the flight of the foot with no paddling or interfering, the former being most common on account of a draft horse usually standing tooled in, due to his bag, wide front, and a snappy way of going which insures the least possible time being consumed in taking a single step. If the advantage to be gained in the amount of time consumed and energy expended by each of these in a single step is multiplied by the total number of steps, the aggregate for the day's work must be great.

The sum of all these desirable characteristics, in brief, is what a draft horse should be.

The draft horse is the horse for the farmer, for five good reasons: First, because the farmer has the means at hand by which to produce these horses. You would not think of advising the man who has good corn ground to grow wheat if it necessitated his buying a new farm that was adapted to the production of wheat. The same reason applies to this case in point. I believe there are but few farms in this state where there is not at least one pair of

mares suitable, if mated with the proper horse, to produce marketable draft horses. Second, there is a strong natural force, with which every breeder is confronted, which continually results in variation. For instance, you think you can own what is the best mare on earth, and you breed her to what is claimed to be the best horse on earth, and expect to get what is the best colt on earth—but you don't. The fact that he is inferior to both sire and dam is due to variation. The things most essential to the draft horse seem less influenced by this force than those desired in the other types, such as speed and action. In other words, the degree of uniformity which you will realize on what you are striving to attain in breeding draft horses is greater than in any other class of horses. That is the second reason. With regard to the third, you have here a proposition that becomes self-sustaining at the age of two years, because of the common practice, especially in the West, of working them as two-year-olds. You only have to carry these horses two years before they begin to pay for their keep. Then there is the matter of risk. Take a bunch of draft colts on the farm and bring up to market age you have very much less risk of those colts becoming blemished or injured in a way which renders them unmarketable than you do with any other class of colts. Take your wire, for instance; that is the most common cause of injury. Your draft colt is

far more quiet and less apt to get into the wire in the first place than your high bred colt, and if he does get in it, he does not tear himself all to pieces getting out again, as the colt of nervous temperament is apt to do. Then, if the two of them get in, both get hurt alike, and both get out again, the blemish may disqualify the harness or saddle horse, while, unless extensive, it will not materially reduce the market value of the draft horse. The last reason: You put

these colts in as two-year-olds. While the average market age of a horse is five years, many are marketed before that. If you are a good feeder and caretaker the preparation of your colts for market consists simply in doing your moderate day's work in the field, and they go from your hands to the market without any middlemen. You won't find any very wide range between what the producer receives and what these horses finally bring in the market. It does seem to me we have five good reasons why this draft horse is the horse for the farmer to breed.

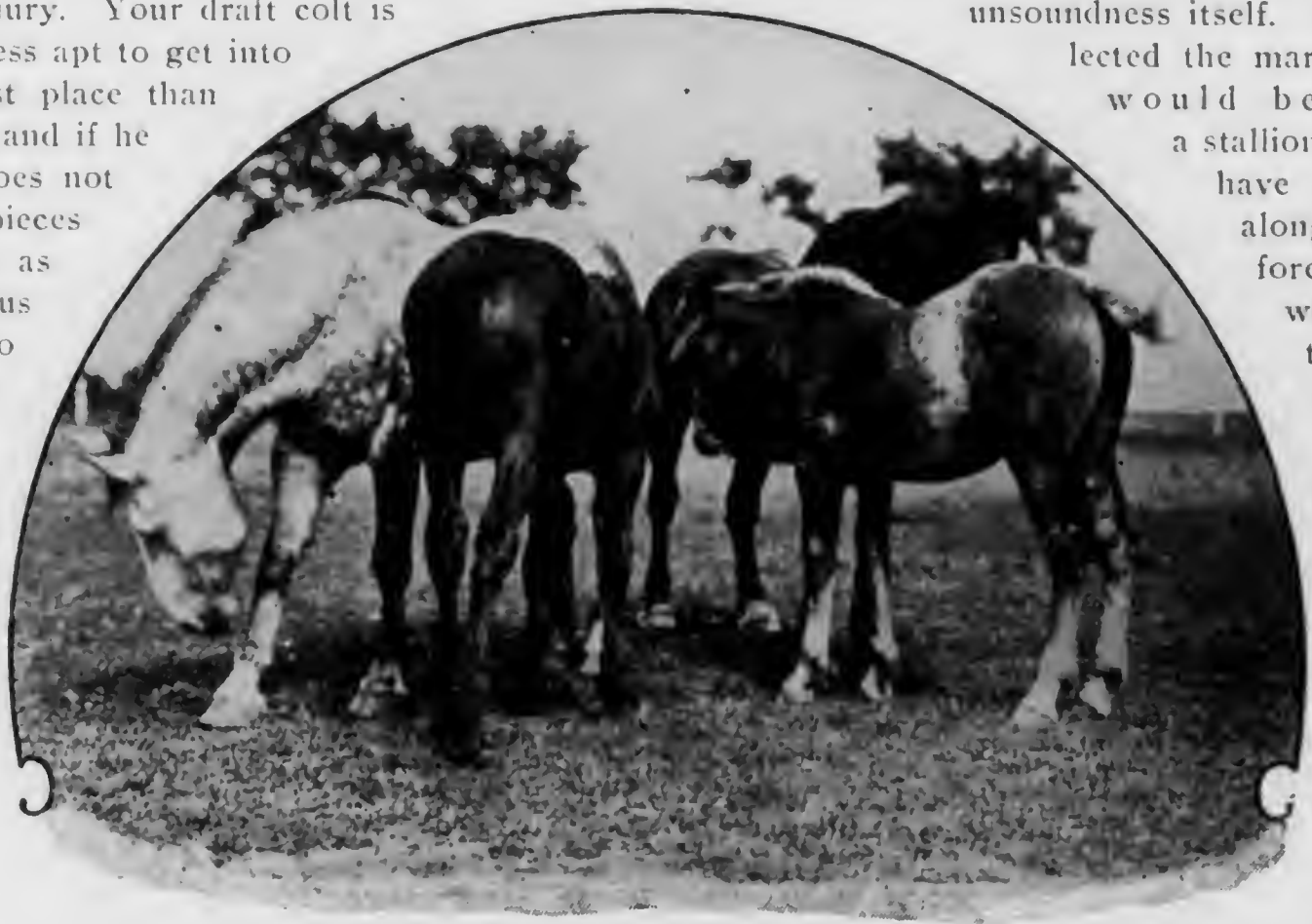
Now in regard to this production. Understand, I am not referring now to pure bred stock, but to market horses. I have already stated the fact that you have mares available, the wherewithal to begin these breeding operations. This question, perhaps, presents itself: You have a number of mares and you want to select the best; what constitutes a good brood mare? The average breeder does not attach enough importance to the mare. The brood mare of many an eastern farmer is the one that is simply "good for nothing" but breeding. After they have done everything else they can with the mare and she has failed, they breed her. You would not expect very good results from that procedure. The things that make a

mare a good brood mare do not always make her a good market mare, and some things desirable in the sire are not so important in the dame. In the selection of your mare, get one that has some possibilities as a brood mare; a big, roomy mare with constitution. I think you will find that quality and compactness, and things like that, are usually sought more in the male. Take, for instance, the breeds that have their origin in a cross of hot blood and cold blood. The hot blood is always on top, on the sire's side. While roominess and constitution, it seems to me, form the primary essentials in brood mares, I would especially, in selecting these mares, avoid hereditary unsoundness. There is no unsoundness more uniformly hereditary than a curby hock. I do not know anything that would disqualify a brood mare from my point of view more than a defective hock. The weak link which measures the strength of the chain in horses of any type, in my observation, is the hock; and I have seen many a good horse, strong in every other respect, absolutely worthless on account of a defective hock. If a horse's legs are so set under him that all parts bear equal weight and perform an equal share of the function of locomotion, no one part is subjected to undue strain and the resulting unsoundness. It is the conformation of the limb which predisposes to unsoundness that is inherited rather than the unsoundness itself. After you have selected the mares, the next thing

would be the choice of a stallion. I do not think I have ever talked along along this line but before I had finished I was asked the question, "What do you consider the best breed?" In the first place there is no best breed; and in the second place, I am diplomatic enough not to say so if there was. When I say there is no best breed I mean this: Each breed has some

characteristic not yet possessed by any other breed. Search out those characteristics that are back of the different breeds and you will find that every breed, I don't care how insignificant it is, has some characteristic more adapted to certain purposes than others. If you want to say that the breed which has the widest range of adaptability is the best breed, I think perhaps I could name it; but when you ask for a statement of the best breed, you have got to tell what you want. I think that is what a man has to do when he starts out to breed his mares. Do not be influenced too strongly by any partisanship. Study your mares, to see what is most deficient. Then study the types of the different draft breeds, and use the one most likely to correct the faults of your mares. After you have satisfied yourself as to what breed you want, I would say consider the type and individuality of the horse. The first thing you want is a good horse, no matter what breed he is. Don't think you can breed to any kind of a horse and trust to variation to give you what you want. The chance is always going the other way. You are more apt to get what you don't want than what you do want.

The next thing, perhaps, in order, would be pedigree. A pedigree is of value only as a record of the ancestry; hence



the advantage of the pure bred each of whose immediate ancestors are accounted for, over the grade, whose progenitors are of unknown or nondescript breeding. The only grade horse I would recognize in service, or that I would permit to stand for service, is a grade horse that has demonstrated his ability to get good stock. If a grade horse has stood in a district for a number of seasons and gets a good type of colts, I do not think you are justified in putting that horse out of service. But the pedigree is a guarantee; it is an insurance policy. When you breed to a grade horse you have no insurance—he stands there an individual, you don't know where he came from as to his ancestry, and therefore you don't know where he is going with regard to his progeny. He may reproduce himself, or he may reproduce something behind him that you don't want. The horse that is pure bred has a guarantee with him that his ancestors are of the same excellence that he is; and for every ancestor that stands behind him, of his own type, he is that much more likely to beget this type. As I have stated, the great thing the breeder has to contend with is unfavorable variation. If you want to eliminate variation as much as possible and save your self all the chances possible, go to the pure bred horse

whose ancestry is known to be uniform and of right sort.

After you have satisfied yourself as to that point, it seems to me there is just one more point. You may have a horse of the breed that you want; he may conform to the market type exactly and be a superior individual, and he may have as good a pedigree as any horse ever possessed; but when that horse is led out of the stable, as soon as he sticks his head out of the door, you may wonder whether he is a stallion, a stag, or a gelding, and in some cases you may even suspect him of being a mare. He lacks masculinity. The prepotent, impressive sire will have the development of forehead, the hardness of feature, the courage and boldness characteristic of the male, and without these manifestations of sex characters you can hardly hope for success, even though he has type, individuality and breeding.

To summarize, the fact has been established, I believe, that the farmer's horse is the drafter, the correct ideal of which is the market type. The successful production of this horse involves the selection of large, roomy, vigorous, well formed mares, and a stallion in which breed, character, type, individuality, purity of lineage and masculinity are well marked, leading features.



Prize Duroc-Jersey Hogs, bred and owned by W. F. Harshman, Thurmont, Md. Mr. Harshman keeps a large and select herd and always has a choice lot of breeding animals for sale. See his adv. in this issue.



PEDIGREED HOGS ON PORK MARKET.

A very fine breeder wrote us that he had 12 fine large brood sows that were fat. He had offered them at \$25 each. They were well bred and each of them wearing a pedigree entitling her to record. He had offered them for sale at \$25 each without any takers. He knew they were great bargains and supposed they would be snapped up like hot cakes, but they did not cause a ripple of excitement. He found a buyer for them all in a bunch. He was a shipper on the Chicago market. He gave him the market price last week and the 12 head brought him \$298.50, lacking only a few cents of averaging \$25 a head, the price that was asked as breeders. If a few of the good breeders would have the same courage to pork a lot of their breeding stuff that was in condition to do so, it would be a great benefit to the breeding business and they would get anything that was lost in this made up on the balance, which would have an increased value in decreasing the numbers, especially on sale. It would be lifting a burden that has weighed down the price by the offerings.

There is likely to be just the same kind of an awakening in the breeding animals as there was in the pork market and the demand will soon be greater than the supply, and

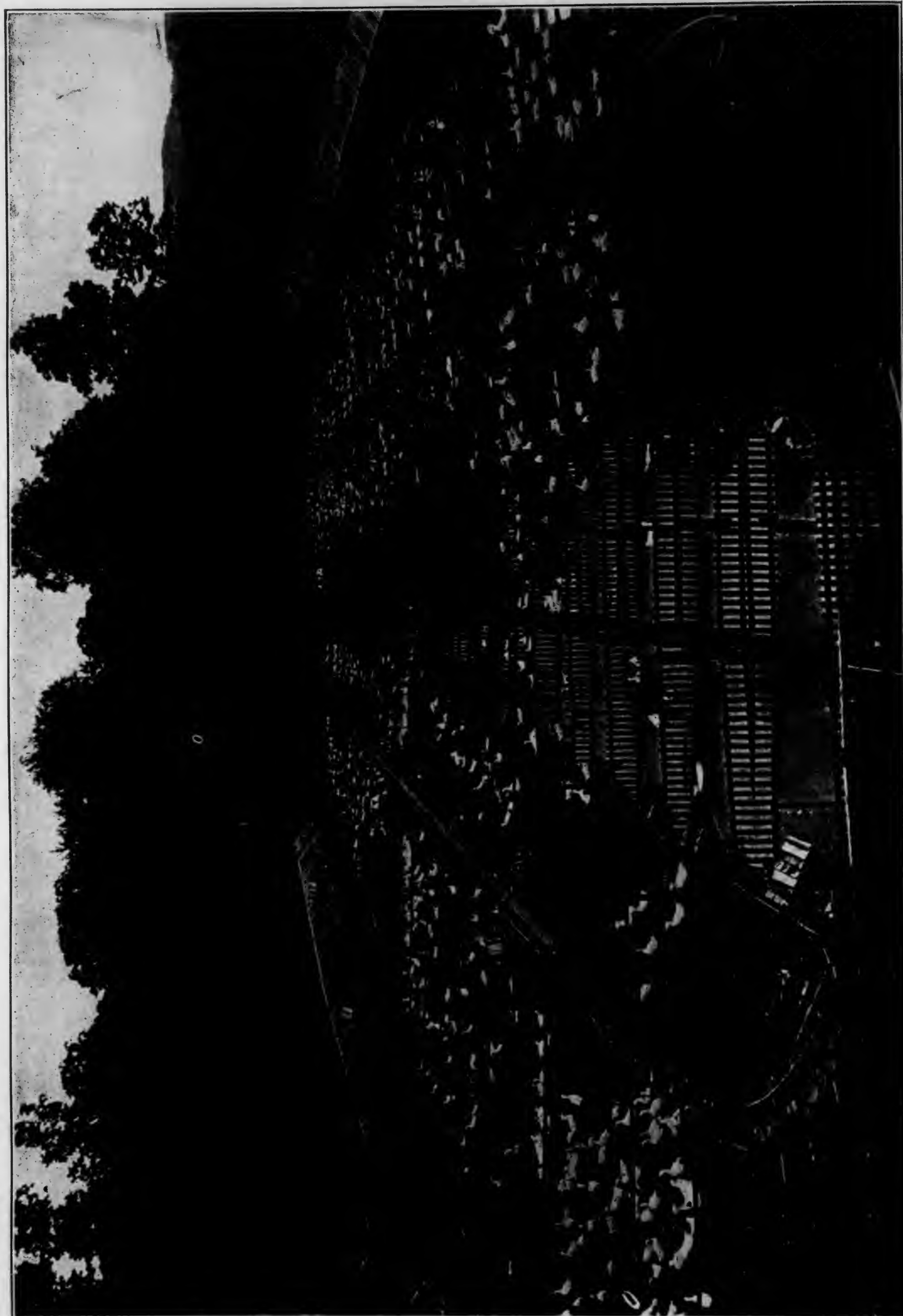
the price will advance and reach where it should be held easily.

A few more occurrences of this kind will convince some of the long-headed parties wanting breeding stock that they have got to get pretty quick action or else pay a much higher price. The wise man is the one that buys when the others don't want and sells when everybody wants.—National Stockman and Farmer.

HOG WEIGHT AND SHRINKAGE.

Hogs shrink from live to dressed weight 18 to 20 per cent., according to weight. Heavy, solid hogs shrink the least. Most packers estimate 20 per cent. shrinkage, and this is about the average. This is on a lot basis, of course. There is a further shrinkage of about 1½ per cent. in chilling.

A test of a large number of hogs averaging 234.21 pounds live weight, showed a shrinkage of 18.84 per cent. from live to dressed weight. This, of course, was the hot weight and not the chilled dressed weight; also, of course, with the head on and the ham facings. The net yield of these hogs was 69.51 per cent of the live weight, figuring sides, hams, shoulders, lard, grease and rough or market meats.



View of the Breeding Yards at the Oxford Poultry Farm.



OXFORD POULTRY FARM

OXFORD, PA.

50,000 Ducks a Year.



A BUSINESS EMPLOYING A DOZEN MEN; USING 500 TONS OF FEED, 72 INCUBATORS, HOLDING 21,000 EGGS; 1500 BREEDING DUCKS, LAYING 150,000 EGGS YEARLY, AND SENDING 50,000 DUCKS, AVERAGING NEARLY 5 LBS EACH AT TEN WEEKS, TO MARKET YEARLY.

THE Oxford Poultry Farm was founded in 1898 by D. H. Menough, a prominent business man; J. D. Burn, the leading clothier, and R. A. Walker, cashier of the Farmers' National Bank—three of Oxford's business men. These gentlemen figured that ducks could be raised and placed on the market by following business methods that would make the enterprise a profitable investment.

The location was the first matter that had to be decided upon and the one now occupied was finally selected, as it met the requirements of the plans mapped out by the proprietors, and is situated two miles from Oxford, Pa., on the main line of the P. B. & W. R. R., near Lincoln University. The main point to be provided in building such a place was to secure a fresh supply of running spring water through the yards occupied by the laying ducks. The illustration given on the opposite page shows how well they succeeded in their selection. Without this supply of fresh water it is impossible to get the best results from laying ducks. At the present time there are twelve hundred ducks and three hundred drakes kept in these yards, and each yard has its supply of fresh spring water. This is one of the most important items in caring for old ducks. In fact, it would be impossible to make a success in keeping laying ducks without this supply of fresh water.

During the season just past, from December to July 1st, one hundred and twenty thousand eggs were gathered from these yards, ninety thousand of which were used in the incubators on the place, and the balance were sold for incubator purposes and the market.

Besides being able to take care of the laying ducks as described, the farm is equipped with two double and one single heated brooding houses, 554 feet long, with a capacity of 14,000 ducks, and 650 feet of double houses fitted up with cold brooders, having a capacity of 8,000 ducks. The incubator house contains 72 Cyphers No. 3 incubators, having a capacity of 21,000 eggs every four weeks. This gives the farm a capacity of raising and marketing 50,000 ducks every season.

The hatching season runs from February 1st to July 1st. The young ducks are ready for market at the age of ten weeks, at which age they average from 4½ to 5 lbs. apiece. These retail from 18 to 25 cents per lb., owing to the season of the year they are sent to market. The output of the farm is disposed of in the New York market.

One of the most important features of the farm during the shipping season, is the picking houses, where six to

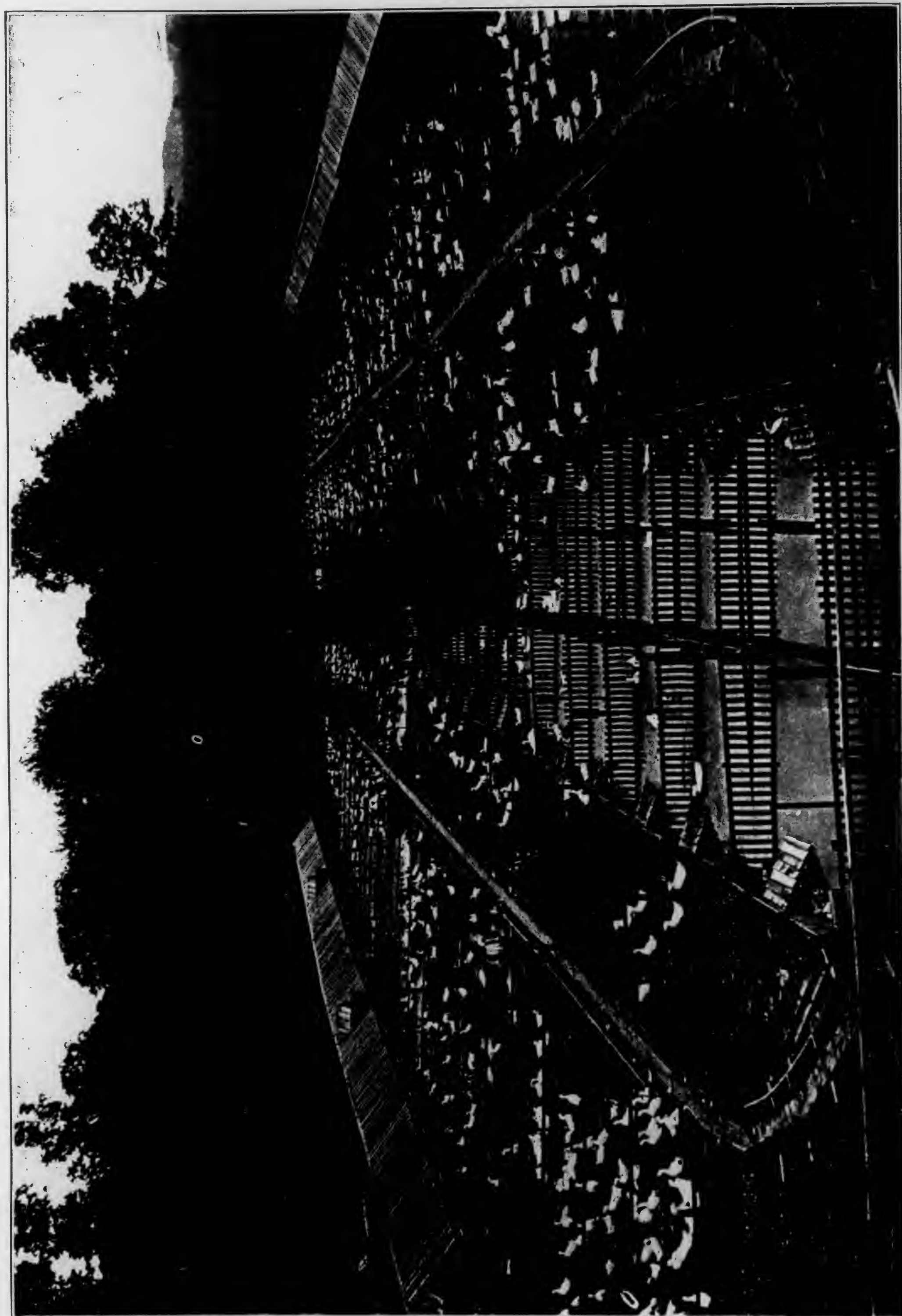
eight pickers are employed, who pick from 400 to 500 ducks a day. The rapidity with which these pickers get the ducks ready for market is a wonder to anyone who ever tried to pick a duck. In fact, one must see these pickers at work to believe the above statement. About 3000 pounds of feathers are secured annually, which find a ready market. One has but little idea what such a pile of feathers would look like.

One can hardly realize the great amount of work accomplished in such an establishment. Outside of the pickers five men are employed daily and one man at night the entire season. During the months of June, July and August it requires three tons of all kinds of feed daily to supply these ducks. The detail amount of work in the preparation of this food cannot be given, as it varies with ducks of different ages.

The details of building up this great establishment has fell upon Mr. D. H. Menough, and when one looks over the place, seeing the great amount of labor-saving devices and the arrangement and location of the entire plant, it is only then that one can appreciate the extent of the work that is carried on in such a place. Probably no one part of the work requires so great an amount of attention as the preparing and mixing of feeds given to ducks of various ages. This problem has been given the closest attention, as upon it almost alone depends the success of the business.

From the time the laying ducks are selected in the fall they are given special care, so as to be in the best possible condition when the hatching season begins. The laying period of the ducks is regulated by the feed given them. The ducks are started to lay about three weeks previous to the time it is desired to fill the incubators, as the first few eggs laid are not counted good eggs for hatching. Therefore, from one season's end to the other, it is one constant round of care, or the business will prove a failure. Under the present system of handling ducks these gentlemen have been able to place from 40,000 to 50,000 ducks on the market yearly, commanding the highest prices and at a cost that leaves a good margin of profit.

Three hundred visitors, who annually visit the farm, express surprise at the sights to be found there. The gentlemen have always been very courteous to visitors in showing and explaining to them everything connected with the place. One can hardly realize what a flock of 30,000 ducks, of all ages and sizes, look like, especially when in great rows of pens. The sight of 1,500 large white Pekin ducks in the breeding pens alone is a sight



View of the Breeding Yards at the Oxford Poultry Farm.



OXFORD POULTRY FARM

OXFORD, PA.

50,000 Ducks a Year.



A BUSINESS EMPLOYING A DOZEN MEN; USING 500 TONS OF FEED, 72 INCUBATORS, HOLDING 21,000 EGGS; 1500 BREEDING DUCKS, LAYING 150,000 EGGS YEARLY, AND SENDING 50,000 DUCKS, AVERAGING NEARLY 5 Lbs EACH AT TEN WEEKS, TO MARKET YEARLY.

THE Oxford Poultry Farm was founded in 1898 by D. H. Menough, a prominent business man; J. D. Burn, the leading clothier, and R. A. Walker, cashier of the Farmers' National Bank—three of Oxford's business men. These gentlemen figured that ducks could be raised and placed on the market by following business methods that would make the enterprise a profitable investment.

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never to be forgotten. While there have been great demands made for breeding ducks and eggs for hatching, these gentlemen have never catered to this line of trade.

However, quite a number are sold each year along these lines, but it is only a small item, as they have never entered that part of the business.



Yards for Growing Ducks at the Oxford Poultry Farm.

The Heart of a "Soulless Corporation"

(An Excerpt from an article in Harper's Weekly, by John Kimberly Mumford).

I HAVE been observing the human side of the business problem, the difficult process of injecting sentiment into business without bringing both to grief.

Practical, tangible altruism, which is felt in the daily life of the workman and can be seen with the naked eye, is the "new face at the door."

Not so far back manufacturers had no notion of conserving by good treatment the subtle but enormous energy that is born in a workingman from good housing, good working conditions, mental uplift, and a consciousness that he is looked on by his employer as a man and a brother and not as a pack animal. To-day the employer who makes his workmen and workwomen toil in the midst of filth, physical and moral, bad air, and hopeless depression, is a man branded and a man doomed, as surely as the Mississippi flows to the Gulf. And sentiment has done that. They say it is just pure business, but it isn't. The manufacturer may do it for dollars, but behind him and inside him there is at work something bigger and deeper, although he may not know it—to-wit, a subconsciousness of the brotherhood of man.

Chicago is keen on the welfare problem, because from the nature of its population, perhaps, the problem presses on it persistently, and its Moseses, both the hired and the volunteer, never rest from their labors.

In the general solution of the welfare problem the small shop, the individual manufacturer, does not at the moment cut so much of a figure. In the final aggregate he will be an enormous factor, but in making the custom he is not the most effective agent. It is the huge corporation, carrying the burden of anathema and responsibility, and the invested money of a hundred thousand persons whom it

never saw nor heard of, which is foreordained, willing or unwilling, to be promoter of the great purpose, to make decency and fair play universal institutions that shall endure while the world stands. To the men on the watch-tower this truth is as plain as the morning light. Perhaps it may be thus, and not by bloodshed, that we shall at last come to peace on earth.

I elected, therefore, to see what the biggest corporation in Chicago had to say by word of mouth or through the medium of its actions touching this problem of the hour.

The International Harvester Company has \$120,000,000 of capital, it dispensed \$21,763,307.95 in pay-roll wages alone last year, and \$16,783,000 in sales commissions; it makes eighty-five per cent. of the harvesting machinery and a good part of everything else the farmer uses in planting, tilling, and garnering his crops. It takes ore from its own iron mines and wood from its own forests, makes its own pigiron and steel, owns its own coal lands, and at every step of the multifarious processes of manufacture up to the moment when the grain pours, like the stream of gold it is, into the farmers' bins, clears something by way of profit. That is what it is in business for.

A little before noon, after an hour in the twine mill at the McCormick plant of the Harvester Company, I started to leave the building. It is a vast place, with its floor upon floor of whirling machinery, its bales and skeins and ever-lengthening lines of Yucatan sisal, the magney hemp, shining like yellow gold in the gloom. As I skirted the long rows of carding machines, where men were at work skeining the bales and coiling the skeins into metal barrels for the spinning, the hoarse mill whistle brayed out noon, the power giant in the basement left off his turning, and with

a moribund spasm all the maze of machinery came to a standstill. Every man grabbed his hat and coat and fled for daylight. From the corridors where they had vanished, a moment later bounded a girl in work clothes, laughing, hurrying, talking Polish, and behind her another. Then they poured in an ever-increasing, volubly happy, and, above all, swift-footed throng. I looked for the sad color of humanity in masses, but it wasn't there. It was much more like the outpouring of children from a school-room. One thing seemed certain—that the place for mere man was in the safe lee of some motionless machinery that was bolted to the floor, until this headlong current of working-girl had gone by.

The long, low-ceilinged basement of the twine mill is divided through its middle by a gangway enclosed between two quarter partitions. In these are gateways upon either hand. Those on the left lead into the restaurant, and at each of them sits a checker, in a snowy white apron that envelops her from neck to heel, handing lunch checks to the girls as they pass in. Beside the checker's desk is a long counter, where other white-aproned attendants have set out a fine array of coffee and cakes and pie and pudding and dinners of soup, roast, and vegetables. Each girl takes her own and finds a place at one of the numberless tables. Some bring their lunches from home in paper bags and buy coffee or tea at the counter at a cent or so the cup.

In two minutes the midday meal was under way. There was all the jollity and freedom and good nature that you would find anywhere. The first girl that finished crossed the gangway to the space opposite, raised the cover of the upright piano that stood against a pillar in the centre of the room, and started in on the "Merry Widow" waltz. That was the signal for a general pushing back of coffee cups, and in no time a dozen couples were whirling around the floor. More were chatting in the easy chairs about the wall. In the "rest-room" adjoining there were girls lounging on sofas, girls reading magazines and funny papers, and half a dozen girls waiting for their turn to take counsel of a uniformed nurse, who at every noon-time, with her little bag of ointments and bandages and simple medications, holds "office hours" here for the consideration of minor ills.

This may all seem nonsensical. From the hard-headed mill-owner of a quarter of a century ago it would probably have provoked something stronger than exclamations of surprise. A piano jingling out waltzes in a factory on a week day, a warm meal served in civilized fashion on clean dishes, and a nurse bandaging shapely wrists on which machine oil had set up a rash, would have been a strange sight in the factories of our boyhood. But these are not much—only one or two of the visible signs of a new order, a change of the world's heart. The vital and significant part of it was what underlay it, the spirit of the place. Of course it was a workshop, but in the carriage of these girls there was no dependency, no depression. They were contented in their occupation, if faces are signboards, or if bearing is expressive of inward feeling. There was little, if any, trace of the old-time cowed mill-girl air that prevailed, when girls in manufacturing establishments sat around at noon time like feeding animals, perched on a box, or on a lumber pile in the yard.

They were not all beauties. Many were more than pretty, and it didn't require a Hellen to discern that. But all of them had dignity and modesty and good manners. If there was a born rowdy among them, she repressed herself that day.

Watching these spinners of binder twine at their little noonday diversions, I realized the force of one other thing Mr. McCormick had said. It was this:

"Wherever women and girls are employed, this work is an absolute necessity. In fact, it was because of the ef-

fort to better their conditions of work everywhere that the whole welfare system arose, and the results are greater even than they appear on the surface. The improvement in the morale of all the surroundings, as well as the physical environment, makes the task of women and girls happier, but the benefit by no means ends there. You will find that the moral improvement extends to those employed in every department of the business."

He was right. Here lies one of the fundamentals; for, as we in America recognize perhaps more clearly than any other people in the world, woman is the starting-point of all social improvement. These mill-girls do not stay mill-girls. They marry, and they marry mill-men, if not from their own mill, then from some other. They become the mothers of other girls, and of hard-sinewed, clear-headed men, many of whom in another thirty years will be running our factories, our railroads, and our politics. They are to be home-makers and teachers and models to the next generation of the working class.

These are not matters for mincing. They reach down to the moral foundation of the new race. Who that has ever dwelt in an old-fashioned manufacturing town does not know the estimate placed by the local libertine on the "mill-girls"? There were mills enough where a decent girl could bring herself to work only when hunger left her no other recourse. More insistent than the timekeeper's clock, I find less reduceable than the wage scale, is the company's demand that every girl who earns her living in any of this corporation's dozen or more scattered plants shall receive from every man in the employ, whether he be high or low, the respect to which womanhood entitles her. There have been some luminous illustrations, fortunately few, of the fact that for a man to fail of obedience to this rule is a much quicker way of relinquishing his job with the Harvester Company than to submit a written resignation. And whether he is a good man in that job or a commonplace one is a secondary consideration. Greed certainly never prompted this.

This, indeed, is the basis of welfare work, and all the rest in the way of improved conditions comes after, and is made triply effective thereby. There are dressing-rooms and private lockers and lavatory structures apart from the mill building and connected by bridges from every floor. In this, as in every place where there are girls, there is a matron. The walls and the machinery in the shops are cleaned of dust every night by pneumatic process, ventilation is perfect, the conditions are inspected at every hour of the day, and the air of the shops kept as clear of dust and ill odors as may be. But the moral atmosphere is cleaner still. When you sift the whole matter down, the most that betterment work can do is to create in workpeople self-respect and a desire to better themselves, to reveal the possibilities, in the coin of happiness and contentment, that abide in higher living.

The twine-mill girls have a relief association conducted entirely by themselves. Every member is assessed a small percentage of her wages. When one of them is ill, flowers and books are sent to her, a comrade is assigned to sit up nights with her, if necessary, or to lend a hand to her comfort in whatever way it may be required. The core girls of the foundry have a similar society, a restaurant to themselves, and, incidentally a forewoman in the department instead of a man. Thus welfare work gradually reproduces itself. But the system goes further back than the girl in the mill. It aims at something more basic even than her improvement. By the side of the club-house you will see a little peak-roofed building. It was formerly a workingman's cottage. This cottage was bought and turned into a school—an unusual school, a sort of domestic kindergarten for working-men's little girls. Now, children can't go into the mills in Illinois until they are fourteen years old. So at nine they are taken into this school and taught to cook and sew. They are taught to buy things and get their money's worth. The place is furnished, not like a decorative school, but like a workingman's home. This course of instruction extends over five years. When a girl is old enough to go to work and make money, she knows how to sew her own clothes or run a home. In the evening this school is open to the mill-girls. When these co-ordinate systems are established in all the works of the Harvester Company a pretty straight way will have been found for a host of girls from childhood to motherhood, and that's about as good and as human a work as any money power could busy itself with.

THE HAND CREAM SEPARATOR

Authority on the subject of farm dairying will agree that any farmer who milks five cows or more and is either selling the cream or making butter of it, needs a centrifugal separator to secure the best profits.

The hand cream separator, working under favorable conditions, does not leave over 1-20 of a pound of butter fat in 100 pounds of skim-milk. The gravity systems and dilution separator methods of securing the butter fat will leave under favorable conditions, from 1-3 to 3-4 of a pound of butter fat in 100 pounds of milk.

According to these figures a farmer who uses a hand separator and milks 10 cows which produces 60,000 pounds of milk a year, would lose in the skim-milk but 30 pounds of butter fat a year on the total amount of milk. By the other method he would lose from 200 to 450 pounds a year. Figuring butter fat at twenty cents a pound, there would be an annual loss of from \$34 to \$84 between the hand separator and the other methods.

Not only does the machine secure practically all the butter fat, but it delivers the skim-milk in a sweet, warm, and undiluted condition ready to be fed to the calves. Very few dairy utensils are needed, as the milk is separated as soon as it comes from the cow and the skim-milk is fed at once.

Less work is required to handle the milk in this manner than with the other methods.

The cream delivered from the separator is of uniform richness; thus there is a gain in the quantity and quality of butter obtained. Dairies improve the quality of their milk very much by running through the milk and cream before bottling it.—Prof. H. M. Bainer, Colorado Agricultural College.

VALUE OF SILAGE TO THE DAIRYMAN.

The value of silage to the dairyman lies in its economy and practicability as a food for stimulating a persistent milk flow. In the dairy business, the farmer deals with narrow margins and quick returns. He must have a ration that can be produced cheaply on the farm and one that will combine well with any other feeds in maintaining the best physical condition of the animal as well as to stimulate the milk secreting organs. Silage has been found to answer all these requirements.

Corn is considered the best silage crop and from the standpoint of economy it can be produced more cheaply in Iowa than any other farm crop. This means much to the state that is second only to New York in the number of its dairy cows. Considering the number of acres of corn that are raised in Iowa each year and that 40 per cent of the feeding value of the corn plant remains in the stalk, the silage problem is one of importance. This would mean several thousand dollars to the farmer each year. This is a factor that can not long be ignored. In fact, the silo is rapidly coming into general use all over the state.

The economy of the silo lies in the fact that a larger per cent of material

harvested can be kept longer in less space, with smaller loss than in any other form. The silo does not increase the feeding value of the materials, but it enables one to save the entire crop, regardless of the season, and keeps it in most palatable form during the entire year without deterioration.—The Live Stock Journal.

THE BULL.

No man can afford to head his herd with a scrub bull. The blood is an important item, though not the whole thing. Granted that you see the advisability of a pure bred sire, the next question is how to care for him. If you paid \$100 to \$300 for a bull you naturally want to give him such care as to keep him in his prime as long as possible. It is best to have a stall or shed for the bull where he will be separated from the herd. Give him a yard large enough so that the confinement will not be too severe, and be sure to have his yard surrounded by a bull fence. It is as important to keep people out of the pen as it is to keep the bull in. If possible it is an excellent thing to give him a pasture, if you can turn him out without having him run with the milkers. Often there is a pasture for the calves or young stock that can be used. Keep him in good condition, but do not keep him fat enough for the show ring all the year round. It doesn't pay. Always give him kind treatment, but do not let him become familiar with you.

The Benefits Derived by Using a TUBULAR

are so many, that after a man buys one, he wonders why he waited so long, to "get wise."

Don't you wait and then regret; but investigate, now, the superiority of the Tubular Separator.



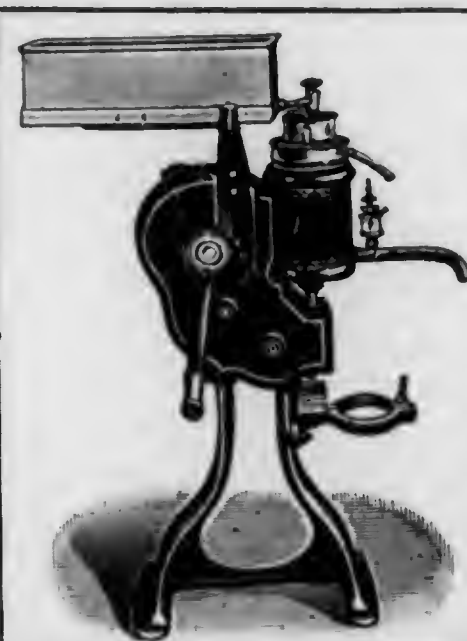
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Clean skimming—Suspended bottom fed bowl.
Durability—Made to stand wear and tear.
Economy—Less attention—less repairs than other separators require.

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FOR 16 YEARS THE BEST!
**STILL BETTER
IN 1908**
**UNITED STATES
Cream Separators.**



The United States has always, since its introduction, separated more cream from the milk, and has done it more thoroughly and quickly than any other separator. The figures of the public national and international tests demonstrate this.

THE 1908 MODELS HAVE IMPROVEMENTS

which make the handling of milk still easier, quicker and more profitable. They do their work more efficiently, more economically than any other, and are built to wear. In spite of the fact that the demand is greater than ever before, and that dairymen everywhere are exchanging other makes for the reliable and efficient United States, the standard separator, we are prepared to make prompt deliveries anywhere.

Write to-day for "Catalogue No. 8199" and any desired particulars
VERMONT FARM MACHINE CO., Bellows Falls, Vt.
Distributing warehouses at: Chicago, Ill., La Crosse, Wis., Minneapolis, Minn., Kansas City, Mo., Omaha, Neb., Toledo, O., Salt Lake City, Utah, Denver, Colo., San Francisco, Cal., Spokane, Wash., Portland, Ore., Buffalo, N. Y., Auburn, Me., Montreal and Sherbrooke, Quebec, Winnipeg, Man., Hamilton, Ont., Calgary, Alta.

WHAT A CREAM SEPARATOR DID.

Not long since, writes E. R. Towle, of Vermont, in Hoard's Dairyman, I happened to meet a well known farmer on the train, and in the conversation that followed concerning dairy matters, he spoke of his experience years ago at a time when the gravity process was in use in the raising of cream. He kept at this time a good herd of Ayrshire cows, twenty-four in number, and made butter on the farm. He would notice that after the cream had been removed the milk would look yellow and rich, as if the creaming had been imperfectly done, but any effort to obtain more were without results. He was a careful, painstaking man, one who liked to be thorough and successful in his work.

One spring, in the month of May, he was making 90 pounds of butter in a week from these twenty-four cows, a pretty small amount we should say now.

About this time the farm separators were coming into use and he determined to try one. To his surprise the first week used and following directly the one just mentioned, he made 140 pounds of butter, or 50 pounds more than in the other week with the gravity process.

He was much surprised at the result and gratified that he had so readily found a way out of his difficulty. At this rate of increase it did not take very long to pay for the separator from the over-run in the butter produced.

THIRD ANNUAL DAIRY SHOW.

The third annual dairy show will be held at Chicago and in the Coliseum, December 2 to 10 inclusive. It is desired to make this dairy show a strong representative of all dairy interests, to bring together dairymen, butter and cheese makers, farmers and manufacturers of dairy products from all parts of the country, for educational purposes; also to present at this gathering the best and most up-to-date makes of dairy machinery, and to show choice herds of cattle representing the different dairy breeds; in fact, it is desired to make the occasion the big event of the year for dairying, and to so exhibit the different branches of the dairy industry that the people of the country will realize the importance and magnitude of this great industry.

All communications should be addressed to the Nation Dairy Show Association, 154 Washington street, Room 307, Chicago, Ill.

CONCISELY STATED.

Professor C. L. Beach of the Vermont experiment station, condenses the science of feeding cows into the following paragraph which should be studied by cow farmers everywhere:

(1) The more food the cow can be induced to eat the more milk she will produce. Cows do not usually consume more food than they can properly digest. The ration therefore should be made as palatable as possible in order to induce the cow to eat a large quantity.



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(2) The larger amount of protein in the ration the larger the milk flow. Protein in the ration is essential to the production of the milk.

(3) The less energy required to digest the ration the larger the milk flow.

(4) The richer the ration the richer the manure. The dairy farmer must look here for a large part of his return.

(5) No two cows can be fed alike. Each must be studied differently. Increase the protein in the ration and watch the milk flow.—The Ranch.

The cow that is not worth her keep should go to the block. The first thing is to determine with accuracy what animals are housed and fed at a loss. The chief of the Dairy Division has a plan which we will be glad to submit to the interested dairyman. Write him for it, care of the Department of Agriculture, Washington, D. C.

The calf is often a fine market for milk. One Pennsylvania dairyman reports that he kept a record of 80 calves which consumed 12,000 quarts of milk for which he received \$481, or over 4 cents per quart, and the calves did the milking. He estimates that it takes 146 quarts of milk to make a calf four weeks old, which will weigh

160 pounds if they have Holstein blood.—Holstein Register.

PLANS FOR NEW DAIRY BARN

For the past two or three years the Dairy Division of the Department of Agriculture has been making an investigation of all the principal dairy barns in the United States and a study of the best methods of construction, with reference to convenience, cheapness in feeding and handling of stock, sanitation, etc. The result is that the division has a large number of plans suitable for building barns and stables of varying costs, so that any one contemplating building a barn can obtain, by simply corresponding with the chief of the division, a set of building plans which will probably just about meet his needs.

"What man has done, man can do." George Eifers, of Solon, McHenry county, Ill., has a dairy of 23 cows, mostly grades. From March 1, 1907, to March 1, 1908, he delivered to the Solon creamery 202,736 pounds of milk for which he received an average of \$1.345 per bushel. The total receipts for the year were \$2,804.17 which was an average of \$121.925 per cow.—Hoard's Dairyman.

Things to Think About.

Articles Discussed Under This Head
Open to Any of Our Readers.

The Oklahoma Experiment Station has recently conducted a hog-feeding experiment to determine the relative value of foodstuffs. Thirty head of Duroc-Jersey and Poland-China hogs were selected and divided into lots of five each. These fed exclusively on corn were found to have made 100 pounds of gain at a cost of \$8.10, and those fed seven parts corn and one meat meal, \$4.00. Corn meal eleven and meat meal one part, alternated every two weeks by corn meal alone, \$6.38; corn meal fed with alfalfa hay, all they could eat, \$5.88; corn meal with cow pea hay, \$6.67. Those fed on corn meal alone probably made gain at a greater cost, as they were out of condition part of the time, but that is what is likely to happen to hogs fed exclusively on corn.

The farm price of eggs in 1899 was 11.15 cents per dozen as an average for the United States. In 1903, 12.37 cents per dozen; in 1904, 17.20 cents; in 1905, 18.70 cents; in 1906, 17 cents, and in 1907, 18.20. Dressed poultry sold in New York in 1899 for 10.78 cents per pound wholesale, 12.97 cents in 1903, for 12.57 cents in 1904, for 13.36 cents in 1905, for 13.20 cents in 1906 and for 14.90 cents in 1907. You will thus see that the prices of poultry and eggs are steadily advancing year after year. The demand for choice poultry and eggs is increasing rapidly, and prices are bound to go higher. You will make no mistake going into the poultry business, providing you go at it right. You can make a success in no business unless you give it time and attention, and poultry is no exception to the rule.—Southern Magazine.

Hogs often suffer very much from vermin. Lice are introduced from neighboring herds, and the losses in feeding are often severe, especially among young pigs, when death is sometimes a secondary if not an immediate result. When very numerous lice are a very serious drain on vitality, fattening is prevented, and in case of exposure to disease the lousy hogs are much more liable to contract and succumb to it. Vermin are most common around the ears, inside the legs, and in the folds of the skin on the jaw, sides and flanks. In light and isolated cases they may be destroyed by washing the hogs. In severe cases, however, especially where the whole herd is affected, thorough spraying or dipping should be resorted to. In this case a dipping tank will be a great convenience. One of the most effective and cheapest preparations to use

as a dip is a two per cent. solution of creolin. The common tobacco dips used for sheep scab are also efficacious. If the hogs are washed, apply the solution with a broom; if they are sprayed, use an ordinary spray pump; for dipping, use a dipping tank. When being washed or sprayed the hogs should stand on a tight board floor.—W. H. Hanson, in Indiana Farmer.

At its experiment station at Bethesda, Md., just outside of Washington, the Bureau of Animal Industry is conducting a protracted experiment with chickens. The trial has been going on now for two years, and is devoted especially to egg producing. Former experiments along this line conducted by experiment station in various states have not continued over so long a period as it is intended to carry this one. The bureau maintains about two hundred egg-laying hens, all of the Plymouth Rock kind. These are divided into several pens, some being fed dry mash, some moist mash, some being fed by scattering the feed, others by measuring it out in troughs. It is hoped by this experiment to determine just what method of feeding will produce the most eggs; and by carrying on the work carefully for several years to reveal some valuable information on the subject of the vitality of the fowls, as produced by the several methods of feeding.

There is no time in the life of a fowl when its vigor and vitality are so well indicated as at molting time. Fowls that molt in a short time and hardly stop laying during that period as a rule have strong constitutions and if properly fed give a large yearly yield. During the molting period is said to be a good time to select the layers. If it is necessary to make the selection at some other time then the conformation of the fowl must be depended upon and is a fairly good guide. A long, deep bodied fowl should be chosen as likely to be a good layer rather than the short bodied fowl with an underline like a semi-circle. A hearty, vigorous fowl such as is required for abundant egg production has a long body, deep chest and a long and quite straight underline.—Farmer's Advocate.

For the first time in the history of this country corn is being shipped to it from a foreign land. 20,000 bushels

have arrived from Argentina, South America.

A horse famine of serious proportions prevails in Texas, owing to the great rush of farmers making new homes. Contractors, who for years furnished the U. S. Army horses are either refusing to make bids or making them with limitations and restrictions, declaring an unprecedented scarcity and that breeding is being done on a large scale at present.

Silo Construction—United States Department of Agriculture, farmers' bulletin No. 32; Cornell University Experiment Station bulletin No. 167; University of Illinois Experiment Station bulletin No. 102.

Crops for the Silo and How to Fill It—Ohio Experiment Station bulletin No. 155; Tennessee Experiment Station bulletin No. 1, vol XVII; University of Illinois Experiment Station bulletin No. 101. Farmers can get full information by writing for these bulletins.

Western range men all bring in the same report that the supply of cattle will not reach last year's proportions by fully 25 per cent. The cattle are not there to come. Cattlemen are all bullish in their opinions and say that while prices may break temporarily on occasional big runs the average for the season is certain to be good provided there is any competition at all from feeder buyers.

Prof. H. Otis, at the College of Agriculture, University of Wisconsin, has just completed a special study of the value of alfalfa as a feed for dairy cows. An experiment which he conducted showed that young cows not giving milk can be kept in good condition during the winter, and gain from 1.25 to 1.5 pounds per day when fed nothing but alfalfa hay.

If good blooded sheep are being crowded onto the market because of shortage of fodder, don't let them go for slaughter. Secure them for a flock foundation. It's a favorable time.—Maine Farmer.

Keep your pedigree stock breeding and record your pedigrees, keep the best sires and breed for type, quality and early maturity.

DEDUCTIONS MADE FROM SHEEP BREEDING EXPERIMENTS.

The University of Wisconsin Agricultural Experiment Station has recently completed a five years' record of its flock of sheep undertaken to furnish reliable information pertaining to sheep husbandry. These records were compiled from a flock of 240 ewes, and at the conclusion of the five years' experiment, the conclusions following were arrived at:

The normal period of gestation, or the time from which a normal ewe is bred to the time of lambing, ranges from 145 to 151 days, and the greatest per cent of ewes will lamb 147 days after service. The gestation period appears to be somewhat longer for the male than for the female lambs. The per cent of males born is practically the same as that of females. The larger per cent of lambs born on or before the 147th day of pregnancy is strong, and after this time the number of weak and dead lambs is greatly increased. The number of days a lamb is carried by the ewe does not seem to have any effect on its size.

The largest per cent of increase is due to twin lambs, and there is no appreciable difference in the per cent of twins of the different breeds. The production of twins and triplet lambs is detrimental to the strength and vitality of lambs at birth. Shropshire ewes appear to be more prolific than any other breed. Ewes six years old produce the greatest per cent of increase, while young ewes have the greater per cent of single lambs. The per cent of ram lambs increases and the per cent of ewe lambs decreases as the age of the ewe advances.

A ram is at his best at two and three years of age. The age of the dam does not have any effect on the sex of the offspring. Ram lambs average about one-half pound heavier at birth than ewe lambs. The larger the ewe the greater the per cent of increase, while the ram has no effect on the lambs in this respect. The size of the ewe, and not the size of the ram, determines the size of the lamb.

VETERINARY EDUCATION.

The veterinary department of the Kansas agricultural college is one department of that great institution which has developed greatly within the last few years. No better evidence of the importance of this Kansas work in veterinary science can be given than the fact that the bureau of animal industry of the United States department of agriculture placed this department as fifth in a list of 10 other similar institutions, which list is designated as including the best veterinary schools of the United States. This list includes veterinary departments of agricultural colleges of the following states which rank in importance in the order given: Illinois, Indiana, Iowa, Missouri, Kansas, New York, Ohio, California, Washington, Pennsylvania.

The above classification was made as a result of investigation by a committee from the United States department of animal industry. The object of the investigation was to determine upon the educational institutions ca-

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pable of preparing men for government work. The committee recommended graduates of the veterinary colleges of the above named states as eligible to the United States civil service examination for veterinary inspectors in the bureau of animal industry.—Farmers Advocate.

The Kansas experiment station has found that a ton of alfalfa hay will make upwards of 800 pounds of gain on hogs, and a similar gain has been made on alfalfa when it is used as pasture. The Nebraska station was able to make gains at a cost of 2 cents per pound on hogs weighing 265 pounds when these were on alfalfa pasture and fed, in addition, three pounds of corn daily per hundred pounds weight of hogs.

These figures are taken from an address by Prof. Kinzer of that station, before the state board of agriculture of Kansas last winter. No hog grower, the Professor asserted, can afford to be without alfalfa for his hogs and pigs.

If the farmers will only keep a strict account of the poultry they consume at home during the months of June, July, August and September, when the young birds begin to get large enough to eat, they will soon begin to see what a saving their poultry is to them. Keep in touch with the market price and give due credit for every bird and egg consumed and be fair with biddie. You will be surprised and you will not need false teeth so soon either.

A Wisconsin dairy authority is against clipping the hair on the udder, as brushing and dampening it and using a sanitary pail will insure clean milk.

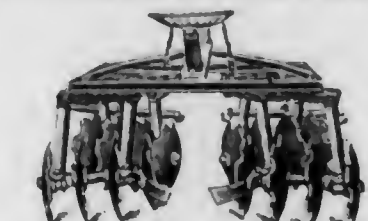
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The Secretaries Corner

SOME STATE FAIRS AND EXPOSITIONS FOR 1908.

American Royal—Kansas City, Mo., Oct. 12-17. Allen M. Thompson, secretary, Nashua, Mo.

Canada National Exhibition—Toronto, Ont., Aug. 29-Sept. 14. J. O. Orr, manager and secretary.

Colorado Interstate Fair and Exposition—Denver, Sept. 7-12. Hiram E. Hills, secretary.

Illinois State Fair—Springfield, Sept. 25-Oct. 2. J. K. Dickerson, secretary.

Indiana State Fair—Indianapolis, Sept. 7-11. Chas. Downing, secretary.

International Live Stock Exposition—Chicago, Nov. 28-Dec. 5. B. H. Heide, general superintendent.

Inter-State Fair—Sioux City, Iowa, Sept. 7-12. F. L. Wirick, secretary.

Iowa State Fair and Exposition—Des Moines, Aug. 29-28. J. C. Simpson, secretary.

Central Kansas Fair Association—Hutchinson, Sept. 14-19. A. L. Sponsler, secretary.

Kansas State Exposition Company—Topeka, Sept. 7-12. R. T. Kreipe, secretary.

Michigan State Fair—Detroit, Sept. 3-11. I. H. Butterfield, secretary.

Minnesota State Fair—Hamline, Aug. 31-Sept. 5. C. H. Cosgrove, secretary.

Missouri State Fair—Sedalia, Oct. 3-9. John T. Stinson, secretary.

Nebraska State Fair—Lincoln, Aug. 28-Sept. 4. W. R. Mellor, secretary.

Ohio State Fair—Columbus, Aug. 31-Sept. 4. T. L. Calvert, secretary.

Oklahoma State Fair—Oklahoma City, Oct. 1-10. H. Overholser, secretary.

South Dakota State Fair—Huron, Sept. 7-11. C. L. McIlvaine, secretary.

Texas State Fair—Dallas, Oct. 17-Nov. 1. Sydney Smith, secretary.

Wisconsin State Fair—Milwaukee, Sept. 7-11. John M. True, secretary, Madison, Wis.

New York—Syracuse, Sept. 14-19. North Carolina—Raleigh, Oct. 12-17.

New Jersey—Trenton, Sept. 28 to Oct. 2.

West Virginia—Wheeling, Sept. 7-11.

THE OMAHA EXPOSITION.

The manufacturers of farm implements, pianos, and other farm home equipment, seedsmen, grain dealers

and live stock breeders have responded in a liberal way, and have made it possible for the National Corn Exposition, which will be held in Omaha in December to offer premiums on corn and other grains and grasses aggregating about \$50,000.00.

This is the largest amount of premiums ever offered for the grains and grasses at one exposition. Many of the premiums are the most modern farm implements, and will go to equip the farms of those who win the prizes for the best grains and grasses.

The premium list of the National Corn Exposition offers the latest and best farm equipment including gasoline engines and corn shellers worth from \$100 to \$450 and pianos worth \$600.

At this National Corn Exposition it will not be necessary to have a whole sheaf of oats, wheat or other grain such as self binders make, in order to qualify. According to the rules bundles three inches in diameter, which show the type and character of the straw as well as the head and grain, will make it possible for the judges to determine more intelligently the value of the grain.

The Iowa Duroc Swine Breeders have subscribed about \$2500 worth of thoroughbred Duroc swine as special premiums to Iowa corn growers who win prizes on their grains at the National Corn Exposition to be held in Omaha next December. This means 72 head of fine hogs will be distributed over the state of Iowa as it is unlikely the farmers of any one section will win all the premiums. Breeders of thoroughbred hogs in Webster county, Nebraska, have also offered several hundred dollars worth of swine for special Nebraska prizes.

Secretary Wilson to Resign.

It has been announced that the Secretary of Agriculture, Mr. James Wilson, has decided to resign his post at the close of this presidential term. "Farmer" Wilson is the greatest Agricultural Secretary the United States has ever had, and he has served for more than eleven years in his department. This is the longest period of service in the cabinet since Albert Gallatin held the post of Secretary of the Treasury from 1801 to 1813.

Prize Winning R. C. Rhode Island Reds



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The Ayrshire Breeders' Association has issued its year book for 1908. It contains reports of proceedings of the society, lists of awards in dairy tests for 1907 and other information of great value to Ayrshire breeders. Copies may be secured on application to Sec. C. M. Winslow at Brandon, Vt.

The 31st volume of the American Hereford Record gives 20,000 pedigrees, carrying the numbers from 265001 to 285000, is carefully printed, fully indexed and handsomely illustrated with portraits of prominent representatives of the breed. Robert H. Haslett of Kansas is president; C. R. Thomas, Kansas City, Mo., secretary.

The Holstein-Friesian Association has put out a condensed report of its 23rd annual meeting. It gives much valuable data of interest to all dairymen, especially so on the subject of the shipment of cattle from one State to another. A copy of the report can be had by addressing F. L. Houghton, Secretary, Brattleboro, Vt.

The Holstein-Friesian Association is offering, at the New York State Fair, some very important prizes. The special butter-fat test open to registered cows of all breeds carries a prize list of \$400, of which \$200 is contributed by the Holstein-Friesian Association.

There are two classes in this test. Class A is for cows making most butter fat in 48 hours, and is divided into \$50, \$30 and \$20. Class B is for cows commencing the test at least six months after calving, and the same prizes are offered.

Class C is for heifers under three years old and Class D is for heifers six months after calving. Age is computed from registry papers. The same prizes are offered as in older classes.

For exhibition of Holsteins liberal prizes are offered, \$300 being contributed by the Holstein-Friesian Association, in addition to \$650 offered by New York State Fair Commission.

Entries close August 15 for exhibits and September 14 for butter tests. Stall fee is \$2. Address the secretary, N. Y. State Fair, Syracuse.

MANAGING A VICIOUS BULL.

As a rule the wisest way of handling a bull inclined to be vicious is to hand him over to the butcher, as an animal of that class is never safe to trust. If he be one that has proven an extra good sire, and it is deemed desirable to keep him for service, the safest and simplest means of handling him is to blindfold him. He may be managed by means of ropes and pulleys, giving him room to move out of his stall when required, and bringing him back to his place; but it is a cumbersome method. Blindfolding quietly takes all the conceit out of a blusterer. A bull which had attacked the manager in the show ring at Ottawa, a few years ago, seriously endangering his life, won first prize in his class at Toronto the following year, appearing quiet, docile and dignified, wearing a pair of stiff leather goggles. A broad bandage of double sacking securely fastened over his

eyes, may serve the purpose ordinarily in the stable. This device may be used to fine advantage in handling a nervous or excitable beast while being led to market or drawn in a wagon or sleigh to be shipped on a train. The writer remembers a case of a heifer received on a train being so wildly excited that she would jump at a person approaching her to untie her halter, but, by throwing a blanket over her head, and afterwards tying a sack over her eyes, she was quietly unloaded and tied behind a wagon, which she followed as meekly as one could desire.

Mismanagement or lack of thought often makes a heap of trouble in the handling of stock. How often do we see men chasing pigs all over the place in the vain effort to get them into a pen, the porkers always going in the contrary direction; while, by having a pair of low, light hurdles hinged together, forming a V-shaped guide, the animals can be corralled quickly, and with the use of no unseemly words. Vicious bulls are generally made so by unwise treatment when young, giving them too much liberty, or using them cruelly. It is well to use them kindly, but trust them no more than is necessary, for it sometimes happens that a bull that has been quiet, suddenly and unexpectedly becomes vicious, and maim a man for life or does him to death. It is the part of wisdom to handle a bull with a strong staff and a safe connection with his nosering, no matter how quiet he may be.—Canadian Farmers' Advocate.

The most of a horse's muscle is in the hind quarters. This may be a surprise to you, says professor Marshall, of the Ohio Agricultural College, but the next time you have an opportunity to see a horse pulling a very heavy load study him carefully. You will be impressed with the idea that most of the work is being done with the hind legs. When the hind foot is moved forward the toe rests on the ground and the leg is bent at the hock joint; if the toe does not slip, and the horse is strong enough for his load, the muscles above, pulling on the tendons fastened to the back and upper point of the hock, will close the joint, or, in other words, straighten the leg and cause the body to move forward. It is by the performance of this act at every step that the horse moves, although, of course, the strain on all the parts is much greater when pulling very hard. This will also show the necessity of having large, broad, straight joints and legs, that give the horse the most secure footing. You have probably also noticed when driving that many horses put their hind foot on the ground in front of the mark left by the fore foot, and the faster they go the greater will be the distance between the marks made by the fore and hind feet. This shows that the length of a step is determined by the hind quarters; it also explains the need of large, strong hocks and legs that are not so crooked as to seem weak or so straight as to lessen the leverage afforded by this very wonderful arrangement of the parts.—Coleman's World.

Fred L. Davis, secretary of the Vermont State Fair Association, has just issued the premium list for the forthcoming fair to be held at White River Junction, Tuesday, Wednesday, Thursday and Friday, September 22, 23, 24 and 25. The premiums are liberal in all departments. For horse racing prizes, \$3,700 is offered. One of the amusement features will be the latest improved flying machine which will give daily exhibitions.

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HOW TO START WITH HOGS.

For capital, labor and time required there is no business of any kind in Colorado that is paying larger profits than raising hogs where the grower is an expert. As high as 300 per cent net profit has been made in six months under ordinary farm conditions.

The possibilities of so large profits have induced many farmers and business men who have had no experience with hogs to go into the business.

Many of these beginners with no knowledge have started on a large scale and have lost money. Handling hogs profitably requires skill and experience and the beginner should start slowly and not get these at too great a cost.

Select any one of the four breeds you like best—Poland-China, Berkshire, Duroc-Jersey or Tamworth.

Get a good judge of hogs to select for you from one to five sows, not more. Select good individuals that come from prolific strains on both sides. With careful management from 12 to 20 pigs should be marketed each year from a prolific, mature sow.

The beginner should study his hogs closely, becoming acquainted intimately with their habits, their likes and dislikes, learning what they need and what is bad for them.

Cheapness in production is the first point to be mastered by the beginner. In his breeding he should work for large litters, early maturity and quality.

Starting with one sow, it will pay to buy a mature one that has shown that she will produce good pigs and raise eight to ten at a litter. She should have two litters a year.

Cheap shelter can be made with straw, sod or boards. The beginner can watch his small lot of hogs carefully and learn how to make them grow rapidly at least expense.

If any trouble occurs it can usually be seen in a small lot of pigs before it is past curing. When there is a loss it cannot be heavy and the grower gets his experience cheaply.

The second year three or four of the best sow pigs should be saved with their dam.

The third year the grower should have learned enough about growing hogs to be able to handle ten sows and their produce and after that he should know enough to slowly increase his hog herd to the limit of his farm.

Cheap shelter and fences should be used until the profits from the hogs will pay for better ones. No large building should be erected until hogs have been grown for several years on the farm and the breeder is sure of what he wants and where he needs to locate it.

Sows should be kept as long as they produce good litters. An old sow will usually have large pigs, a greater number and pigs with more vitality than an immature, growing sow.

Starting with one sow, she will be the foundation of the herd, no matter how large it may become. It will pay to have the first one a good one, even if she costs considerable money. —H. M. Cottrell, Superintendent Farmers' Institutes, Colorado Agricultural College, Fort Collins.

HOG FEEDING EXPERIMENTS.

1. Considered from the point of gain per head per day, skimmed milk and blood meal produce very similar results when used as supplements to corn, when 18 pounds of skimmed milk is fed for each pound of blood meal; or on the basis of one pound of digestible protein in the form of blood meal.

2. The profit made during the entire experiment differs less than one dollar. From this data we concluded that blood meal and skimmed milk have a similar feeding value when fed on the basis of an equal number of pounds of protein, and as supplements to either old or new corn.

3. Hogs fed old corn made gains slightly in excess of the hogs fed new corn in the ear. The difference is so slight that we conclude that there is very little to choose between these two forms of corn as regards average gain per head per day.

4. Hogs fed old corn made a profit slightly in excess of hogs fed new corn.

5. There is no difficulty in using blood meal for hog feeding if it is fed with a small quantity of middlings or some other palatable food, exercising reasonable care to get the hogs started right and not to overfeed at any time.

6. Where a good market is offered for skimmed milk, a margin of \$1.00 between the cost and selling price of the hogs is necessary in order that this by-product may form a part of the ration fed to fattening hogs.

PORK HOGS ADVANCE.

There has been a very sharp advancement in the price of pork hogs on the market since last month, which has grown better as the month grew older. We have taken occasion to inform our readers for several months of the condition in which the market was shaping itself, caused first by the money panic, enabling the packers to force the market below its real value. Then the high price of feed and the low price of hogs operated to cause heavy sales even of the brood sows and young stock sooner than to buy the feed.

This condition of things brought about a scarcity of good marketable stock, while the high price of beef and mutton has compelled a greater consumption of fresh pork and cured hog product. We have been predicting 7c hogs before fall for some time, and it now looks as if we were getting pretty close to it and may go considerably over it, if the corn crop should promise well later on. It shows that a great many people have good property that did not realize it and let them go. They have now awakened to the fact that pork hogs are good cash and desirable property. There is a sharp demand, and while prices may temporarily fluctuate, there is a hardening that will gradually work higher. The advancement last month was over one dollar, the last day of June being top for month and year, \$6.35 cwt.—Am. Swineherd.

Ice cream is the national dish. The Americans eat a plateful as big as Pike's Peak every hot day.

HALLOCK O. K. ELEVATOR POTATO DIGGER.

Just What the Farmer Needs Who Raises Potatoes for Profit.

The Hallock O. K. Elevator Potato Digger is considered the best digger on the market. It combines simplicity in construction with durability and lightness of draft. It does good work under any conditions—gets all the potatoes out of the ground. Wherever the Hallock O. K. Elevator Digger has been tried, it has given complete satisfaction. The following unsolicited testimonial is but one of the many hundreds we have on file in our office:

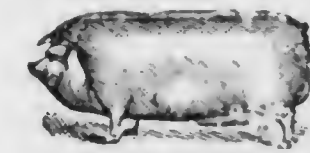
Smithville, N. J., July 10, 1908. A. B. Farquhar Co., York, Pa.

Gentlemen:—I tried your potato digger yesterday and like it very much. Herewith please find check as per bill less freight. I believe it is the best digger on the market.

Very truly yours,

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The manufacturers of the Hallock O. K. Elevator Digger, A. B. Farquhar Co., Ltd., York, Pa., are making a special inducement to introduce this machine into new territory, and it will pay the readers of this paper to write to them for prices and terms. Also on request will be sent catalogue of engines, saw-mills, threshers, grain drills, corn planters, etc.



ENON HERD CHESTER WHITES

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Chester Whites

I have them combining the best blood in Chester County. If you want the good old Chester that has made this county famous, we have them here that will please you. We breed and sell only the best. Write me.

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Farmers and Breeders I now have a large stock, probably the best I ever owned, thoroughbred Poland-China and Chester White Pigs, 2 to 6 mos. old, sows bred, boars ready for service, all from prize winning stock. Guernsey and Jersey Cattle. Buff and Barred Plymouth R. Chickens.

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I now have a large stock of probably the best I ever owned. Cannot tell you all here, but I have Boars and Sows, all breeds, 2 to 6 months old, mated not skinned; sows bred and boars ready for service. Guernsey Cattle and Registered Scotch Collie Puppies. Write for prices and particulars. This stock must go and will be sold. M. B. Turkey, Barred and White P. Rocks, Brown Leghorns and Beagle Dogs.

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HOG CHOLERA

The Hog Worm is the Most Dangerous Foe of the Hog

In almost every outbreak of cholera you will find hogs very wormy. They get a hog out of condition and unthrifty. Then it is an easy prey to disease. The Snoddy Remedy will destroy every character of a hog worm. Even the liver and lung worms, which are the most dangerous, are easily destroyed with the Snoddy Remedy. Ten cents worth of the Snoddy Remedy will clear out the worms and purify the blood of a hundred pound shoat, so that he will be worth one dollar or more in a few weeks than he would have gained without this remedy. Can't you afford to invest ten cents per head to make your shoats worth a dollar per head more than they will without this little investment. Then why waste time and feed on wormy, runty hogs when it is easy to have them thrifty.

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PENNSYLVANIA STATE COLLEGE ON MILKING MACHINES.

That the mechanical cow milkers are attracting more attention is shown by tests being made of their efficiency by our Agricultural Department. The Pennsylvania State College made during last year a number of experiments with the Burrell Lawrence Kennedy Cow Milker in order to ascertain its value as practical helper to the dairyman in these days of scarce and unskilled help. Therefore, while the tests as reported in a recent Bulletin seem to show that a first class hand milker would be able to milk almost as many cows by hand, still, with the scarcity of skilled milkers, it is not unreasonable to conclude that this milking machine may prove of great benefit.

If the tests made had in any way shown some injurious effects on the cows, or the quantity or quality of their product, the value of the machine would be nil or worse. But such is not the case. On the contrary, the results in every way compared favorably to those by skilled hand milking. It also should be kept in mind that the man operating the machine was a novice, and by longer practice even better results might be achieved. Still it is well to keep in mind the precaution given by H. B. Gurler, that well known authority among dairymen and constant user of the B. L. K. milker, never to leave the machine milking to a careless unskilled person, which rule really holds good regarding every kind of dairy machine.

The findings of those connected with the station in New York State as previously reported, have been highly favorable to the machine.—Practical Dairymen.

VIGOROUS FRUIT TREES

Berry and asparagus plants, shrubbery, ornamental trees and shrubs, all at wholesale prices. Quality guaranteed. Healthy, true to name, well-rooted. Every price guaranteed. Get our free illustrated price list before you buy and compare our low prices with others. Write today.

The Westminster Nursery, Box 10, Westminster, Md.

SHORTAGE OF HORSES.

One would suppose on being met at every turn with the numerous auto wagons and vehicles of every kind and for every use, that the demand for horses could not be larger. But on the contrary the autos are simply filling a special demand for quick movements, and the demand for horses to do certain classes of work goes on increasing. There are now two special demands for more horses, those for heavy draft purposes, and the class required for army use. If anything the latter class now seems to have the call on the breeders. In reviewing these demands the Drovers Journal says that the shortage for army purposes is world-wide, that while there are 20,000,000 horses in the United States this nation finds great difficulties in obtaining enough for army supply. So largely is the increased demand it says for industrial purposes, particularly in agriculture, that the receipts at the Chicago and three other western wholesale markets declined around 100,000 in 1907. Farmers so largely increased their operations that there were fewer horses to come forward for distribution to the other great national industries. All the leading markets for the five months of the current year report decreased receipts as compared with a year ago, and all nations are now facing an admitted shortage of horses for military purposes.

To maintain the cavalry troops, the artillery corps and the commissary department of armies it is necessary to annually purchase a large number of horses. England, Germany, France, Austria and Italy are pressed to obtain the requisite number of horses to keep intact their military establishments. In the United States the question of supplying the army with horses is receiving the attention of congress and the subject has been left to a special commission for solution.

The principal obstacle in the way is the market price of cavalry mounts and artillery horses, which sell to the government at \$125 to \$185. At these prices there is not adequate inducement to breeders to raise these particular classes. Farmers can raise

coach horses and drafters as cheaply as military horses, and the former classes find ready sale at \$200 to \$500 in the open market, while the latter offerings can only be sold to the government at such a price as the secretary of war shall name.

In England horses suitable for military purposes are subsidized and can be requisitioned at any time at the original appraisement. The government price averages around \$200, while farmers can raise horses of double this value. So imminent is the shortage in Europe that government studs are being established and also a special premium paid to farmers who raise horses suitable for cavalry mounts for artillery service.

The present shortage throughout all civilized nations of military horses may impel the establishment of government studs to supply the deficit. Even in the United States this system is being championed by the ablest army officers as the surest way to obtain an adequate supply of horses suitable for military purposes.

The Dairy Department of the University of Missouri has recently prepared a bulletin on the best methods of raising calves on skim-milk, and another on feeding dairy cows. These bulletins are printed by the State Board of Agriculture and may be had by addressing Secretary George B. Ellis, Columbia, Mo.

One ounce of carbonate of potassium to each quart of rain water and this applied to the growth will remove warts and other fungus growth in farm animals. Be careful that too much does not reach the tender skin around the wart.

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of trains, trolleys or automobiles if driven with a "Beery Bit," the only absolutely safe and humane bit made. "Four Bits in One." Quickly adjusted to suit any mouth. Write me today for trial offer and much valuable information. Prof. B. S. Beery, Pleasant Hill, Ohio.



NEWTON'S Healer, and Dis-temper and Indigestion Cure. A veterinary remedy for wind, colic, and stomach troubles. Strongly recommended. \$1.00 per box. All druggists, grocers, and mail. The Newton Remedy Co., Toledo, Ohio.



Chicago, Union Stock Yards, Aug. 3.—Demand for cattle is not broad at this time. Outlet for beef is relatively narrow, the sweltering, hot weather cutting consumptive demand considerably. That is why local packers and eastern shipping buyers are not aggressive bidders, while the margin between domestic and foreign rates is not conducive to better buying on expert account. The wonder is that prices are not higher than they are in view of the fact that receipts at Chicago alone for the year to date display a decrease of around 231,000 from the like time of last year, while the falling off at the six leading western markets is 707,000. The fact of the matter is, prices are, if anything, a little lower than one year ago. The only explanation for the remarkable condition is a depression in industrial affairs and a subsequent smaller demand from the meat-eating people. The market is very sensitive, responding to light runs in the way of a sharply higher price gain, only to more than lose under liberal receipts the ground gained. All buyers are very bearish, and quickly take advantage of any opportunity that may arise to pound the market hard. Finished hives and fat yearlings will take care of themselves right along. But the common and medium natives have a rocky road to travel. Plenty of good, hard fat beef steers will soon be available from the western range, and then will the natives of a plainer class feel the full force of buyers' partiality for westerns.

Few Lard Hogs Coming.

Packers fear that they are facing a scarcity of lard hogs. Usually at this time of the year fat, heavy swine are fairly plentiful. But such is not the case at this time, few full loads of these being included in the daily receipts. With corn so high in price it would look as though producers will not convert the same into lard, and if this condition continues the big crop of big weight hogs that usually materializes in September and October will be missing this year. A big portion of the sows that have weaned their pigs are being sent to market in plain flesh, a reflection of the effort of the owners to get away from a high feed bill. Later on the lard hog should command an even greater premium on the plain heavy and light weights than now, but whether the spread will justify feeding corn at prices now prevailing is

not discernable at this time.

Bucky Lambs Poor Sale.

Bucky lambs are being sharply discriminated against, there being a price difference of 75¢@1.00 between them and the fat, castrated lots. And the trouble is that they are hard sellers even at the big discount, especially the big, coarse lots. While the smooth, fat offerings lately have readily commanded upwards of \$6.25, few bucky grades have gone above \$5.25. This occurs annually. Why producers will not castrate their lambs is hard to conceive, when season after season they see their near neighbor, who does this, get around \$1.00 more per cwt. for his offerings than he. This fact, along with the lack of proper and opportune care of the flocks, and permitting the bucks to run too long with the ewes, are probably greater destroyers of profits in the sheep husbandry in the corn belt than even that dreaded pest, the stomach worm.

Cattle and Hog Receipts Decrease.

There was a big falling off in receipts of cattle and hogs last month, although arrivals of sheep were increased. Total marketing of 202,992 cattle, which stood 60,000 head under July of last year, was the smallest since 1905. The decrease would have been even more pronounced had it not been for the increased offerings from Texas and the Northwest ranges. Receipts of hogs were 531,303, being 80,000 fewer than arrived in July of last year, and were the smallest in number since 1905, indicating to what extent the unusual liquidation in previous months has affected the hog supply in this country. A run of 330,199 sheep and lambs compared with the July record receipts of 355,000.

Trade in Cattle Slumps Badly.

Tops for cattle during July were \$8.40, as high as at any time since 1902, but this price was realized during the first week of that month. In the closing week of the month just as good offerings had to go at \$7.85, and the bulk of the sales were at \$5.40@ \$7.00, against \$5.85@ \$7.75 early in the month. The poorer market was occasioned by the hot weather interfering with the outlet for beef, while liberal runs of Texans and western enabled local buyers to pound the market for natives hard. Cows and heifers also sold sharply off, the bulk of trading late in the month being at \$3.25@ \$4.75, while the tops early in

the month were at \$6.50 and outside range for the bulk was up to \$5.50. Trading in stockers and feeders late in July was demoralized, supplies being liberal and demand the slimmest of the year. Bulk of offerings went at \$4.25 and down to \$2.75, as against \$3.35@ \$4.50 early in the month, being the lowest price range since the first week in January.

Hogs Sell Up to \$7.10.

Trade in hogs during July was erratic, but closed up in very satisfactory shape. During the last week of the month tops ruled up to \$7.10, as high as at any time this year, and the bulk of selling was at \$5.90@ \$6.85, which compared with tops at \$6.70, and the bulk at \$6.10@ \$6.60 during the first week of the month. The average weight of the arrivals was only 222 lbs., being 18 lbs. lighter than the same month of last year, and the lightest since July, 1892. High-priced corn was a big factor in bringing the weight down to such a low basis, producers being content to let their offerings come to market in lighter weight in order to avoid meeting a high feed bill.

Better Market for Sheep.

A steadier trade was had for sheep and lambs during July. This was indicated by bulk of trading in the month. Tops for sheep were \$4.60 during the last week in July, and the summit for lambs was \$6.85, while bulk of the sheep went at \$3.75@ \$4.60 and most lambs at \$5.50@ \$6.50.

The Babcock tester and the scales point out the money-making cows as well as the "star boarders."

FOR SALE

The Famous Mary L. Poultry Plant

is offered for sale at a very great bargain. Over \$75,000 have been expended in land, buildings and equipment that you can have for a very few thousands of dollars! And on easy terms. The Mary L. Poultry Plant is without doubt the largest and finest equipped institution of its kind in the world. Thousands of persons have paid 25 cents admission to inspect this property. A never satisfied market is ever ready for the products of the poultry yard.

There is a fortune in this property for the right man. Write today for illustrated descriptive circular and terms.

W. A. GRAHAM, Trustee,
Box 805, SIDNEY, OHIO.

ALFALFA SEEDING.

An Illinois farmer writes: "I wish to try a few acres of alfalfa next year for hog pasture. How should I prepare the ground and sow the seed? Will it do for pasture next year?"

The ground should be prepared as it should be for the garden. It requires a deep plowing and a number of good harrowings. In case the soil is underlaid with a compact subsoil only three or four inches below the surface, it will be necessary to use the subsoil plow. If the soil is a foot or two deep, this will not be necessary. It is not best to sow the seed on a freshly plowed plat. For this reason it is best to sow it on fall plowing that has been plowed deep. If not, you should plow the ground as soon as you possibly can. That is, as soon as you can do the plowing in a workman-like manner. Then harrow well and roll twice to pack the ground as much as possible and then sow the seed late this summer.

A great many still contend that the plant should be sown with a nurse crop. Beardless barley has proven the best, but whatever crop is used as a nurse, not more than a half stand should be sown. If it threatens to crowd out the alfalfa the nurse crop should be cut for hay and the alfalfa given the freedom of the field. Twenty-five pounds of seed may be sown per acre. Buy your seed from a reliable seedsman and see that it is free from impurities.

Since it is important that the grass should go into the first winter with a good stand, we would not attempt to pasture it the first year. Tramping and close grazing can not help but prove detrimental to the crop the first year. By the next spring you can turn in on it and it will be sufficiently set to stand the pasturing of the hogs.

—Journal of Agriculture.

CANADA THISTLES.

Can you tell me what to do with a little patch of Canadian thistles? I have plowed them down; they grow just the same.—Gust Berg, Brookings Co., S. D.

If the patch is small, we believe about the best thing to do for them is to cover the spot about a foot thick with straw manure and leave it there until it rots down and the thistles are completely smothered out.

This thistle is propagated not only by its seed, but by its many and far-reaching roots—principally by the latter. To never leave it go to seed, and by means of a "spud," or deep-cutting, stout hoe, to cut out the plants as often as they show signs of life, will sometimes entirely rid a field or pasture of them. This is particularly true on hard, clay soils. When the soil is more loose and pliable, it is a far more difficult thing to rid it of this pest. Cutting the thistles off at, or a little below the surface of the ground, does little, if any, good, as the many rootlets seem to multiply, and if anything, do better for it. Persistently cutting out two to four inches below the surface will usually wind them up in time.

Where the field affected is large,

to check or smother with clover, and follow with planted crops to be vigorously cultivated and hoed, is a successful way of discouraging and sometimes wholly eliminating this plant, when the seasons are hot and dry. A wet season thus treated does little good, particularly on loose, rich soils. One thing, the rotation of crops should be such that the thistles can not go to seed.

Plowing shallow with a sharp plow immediately after barley harvest, and again deeply just before winter, and thoroughly cultivating between plowings where this thistle shows, and again in the spring several times before seeding, will give the thistles a great set-back, and if followed by carefully cultivated crops, will sometimes exterminate them if the season is favorable.—Dakota Farmer.

NUMBER OF EGGS IN YEAR.

Prof. Graham, of the Ontario Agricultural College at Guelph, says:

"I find it a very difficult matter to get an accurate idea of the number of eggs that the average hen in the province of Ontario produces in a year. I am very much inclined to believe that the average hen does not produce 80 eggs in 12 months. I believe the average hen at the average experiment station does not produce 110 eggs per year. One would expect that the various experiment stations and colleges which are scattered over the United States and Canada they would get probably as good an average production as on the poultry farm. They have many conditions present which are not present on the average farm, and they have other conditions that are probably more favorable. Considering all things, we should get somewhere near the average production at the experiment station.

"I have come to the conclusion that the average production is somewhere about 100 eggs. At the Maine station they had a production of 120 eggs per hen on an average. They have been working on the trap nest system for a number of years, and as far as I know, their record last year was 134 eggs per hen, which means that they had a gain of about 14 eggs per hen over earlier records. I think that you produce a wonderful improvement by selection in the first one or two years, and after that progress becomes slow. You must have a great many conditions favorable to make advancement. From what Prof. Gowell has told me, they had not used any males in their breeding pens that have not been produced from hens that produce 200 eggs per hen per year. All the hens, in their breeding pens have been bred from hens that laid 160 eggs per year, so they might be termed strong producers. No hen is used for breeding purposes until after her egg record has been known for 12 months.

It beats all how some people who keep chickens allow lice to get a start, then potter around all summer fighting the pests. On wash days try carrying out the suds (boiling hot) and sprinkling them over every part of the interior of the chicken house.—Farm Journal.

Dairymen are discarding mangers and are feeding hay and grain on a floor from 1 to 3 inches higher than the one the cow stands on.

Dr. Kathryn Standly, of Brookfield, Mo., has been appointed by Governor Folk as a delegate from Missouri to the International Congress on Tuberculosis, to be held in Washington, September 21st to October 12th. This convention meets triennially and this is the first meeting to be held in America.

The Jersey cow Financial Countess 155100 beats the record and now stands at the head on the butter fat test during one year. The test was made by the Colorado Agricultural Experiment Station. For this period her record is 13.248 pounds of milk and 935 pounds of butter, the latter being 31 pounds less than her own weight.

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JERSEYS—Combination and Golden Lad. For sale—10 cows, 10 heifers and 20 bulls. S. E. NIVEN, Landenberg, Pa.

PURE-BRED Holstein Bull Calf. Eligible for registration. Also high-grade bull calf. MADISON COOPER, 101 Court, Watertown, N. Y.

FOUR High-bred Registered Bull Calves, from 6 weeks old up to 1 yr., at farmers' prices. For full description and pedigree address S. F. WILLIAMS, Canton, Pa.

HOGS.

POLAND CHINAS of best strains at half price now. Large, long pigs, gilts, sows and boars. Satisfaction and safe arrival guaranteed. Write for circular and particulars. A. F. SIEFKER, Defiance, Mo.

FOR SALE—Some fine Yorkshire Pigs—no better stock in U. S. Just imported—new blood. A. A. BRADLEY, Frewsburg, N. Y.

Prices right; Hogs right.—Large English Berkshire and Large Bone Poland-China Hogs—Anything from 8 weeks to teated sows and boars ready for service. Write your wants. GUSS BRUNNER, Sunman, Ind.

REGISTERED Duroc Swine, Bred Sows \$13. Stock of all ages for sale. WM. HARSHMAN, Thurmont, Md.

REGISTERED Duroc Jersey Hogs for sale at panic prices. Beautiful gilts bred to farrow this month and next. April pigs. Address ROBINSON BROS., Myers, Ky.

MISCELLANEOUS.

HORSES Going Blind, Barry Co Iowa City, Ia., can cure

WANTED—30 Dorset Ewes, young and good quality. State number and price. Address P. P. GHEEN, Willow Grove, Pa.

A General Review of Crop Conditions

U. S. Department of Agriculture.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture finds, from the reports of the correspondents and agents of the Bureau, as follows:

The condition of corn on August 1 was 82.5 per cent of a normal, as compared 82.8 last month, 82.8 on August 1, 1907, and 83.1 the ten-year average on August 1.

Preliminary returns indicate a yield of winter wheat of about 14.3 bushels per acre, or a total of 425,940,000 bushels, which compares with 14.6 bushels, and 409,442,000 bushels, respectively, the final estimates of last year's crop. The average quality of the crop is 90.1, against 90.5 last year.

The average condition of spring wheat on August 1 was 80.7 per cent of a normal, as compared with 80.4 month ago, 79.4 on August 1, 1907, 86.9 on August 1, 1906, and 82.7 the ten-year average on August 1.

The condition of the Oats crop on August 1 was 76.8 per cent of a normal, as compared with 85.7 last month, 75.6 on August 1, 1907, 82.8 on August 1, 1906, and 83.8 the ten-year average on August 1.

The proportion of the oats crop of last year in the hands of farmers on August 1 is estimated at 5.0 per cent, equivalent to 38,000,000 bushels, as compared with 7.1 per cent and 68,000,000 bushels, respectively, the corresponding figures of a year ago. In Iowa stocks are 6,566,000 bushels less and in Illinois 2,866,000 bushels less, than a year ago.

The condition of rye on August 1 or at time of harvest was 88.3 per cent of a normal, as compared with 91.2 on July 1, 1908, 88.9 on August 1, 1907, 90.8 on August 1, 1906, and 88.4 the ten-year average at time of harvest.

The average condition of white potatoes on August 1 was 82.9 per cent of a normal, as compared with 89.6 on July 1, 1908, 88.5 on August 1, 1907, 89.0 on August 1, 1906, and 86.8 the ten-year average on August 1.

The average condition of tobacco on August 1 was 85.8, as compared with 86.6 on July 1, 1908, 82.8 on August 1, 1907, 87.2 on August 1, 1906, and 82.3 the ten-year average on August 1.

Preliminary estimate of the acreage of hay is 1.2 per cent more than last year, indicating a total of 44,538,000 acres. The condition of the hay crop on August 1 was 92.1 as compared with 92.6 last month, about 87 on August 1, 1907, and a ten-year average on August 1 of approximately 88.

On August 1, crop conditions in the United States were in the aggregate somewhat better (2 per cent) than a year ago, but slightly (1 per cent) below a ten-year average condition on that date. Of the crops that are above the average may be mentioned winter wheat, hay, cotton and tobacco. Corn, barley, rye, buckwheat, apples, and flax are slightly below the average, potatoes above 5 per cent below, and oats nearly 10 per cent below the average.

The conditions vary, however, in

the different sections of the United States.

In the North Atlantic States general conditions are slightly better (1 per cent) than a year ago, and slightly below (2 per cent) the ten-year average condition on August 1. Corn, wheat, and apples are slightly to moderately above the average condition, while hay, potatoes, oats, rye, buckwheat, and barley are below; the deficiency in condition of potatoes is about 10 per cent, and of hay about 4 per cent.

In the North Central States which are East of the Mississippi River, general crop conditions are about 1 per cent below a year ago and about 4 per cent below the average. Corn is about 7 per cent below, oats 18 per cent below, potatoes 4 per cent below, apples 20 per cent below, and tobacco 6 per cent below the average. Hay is good, being about 10 per cent above the average; wheat, barley, rye, and grapes are slightly above, and peaches are about 50 per cent above the average.

In the North Central States West of the Mississippi River, crop conditions in the aggregate are practically the same as the ten-year average, and nearly 3 per cent better than a year ago. Hay alone of the important crops is materially above (14 per cent) the average; rye is slightly better and peaches about 40 per cent better than the average. Practically all the other important crops show a more or less lower condition than the average, corn being about 2 per cent, wheat 2 to 3 per cent, oats 6 per cent, flax 2 per cent, barley 3 per cent, and apples 20 per cent, respectively, below. The condition of potatoes is about the average.

In the South Atlantic States crop conditions are favorable, being about 4 per cent better than a year ago and nearly 5 per cent above the average. Rice and potatoes are the only ones of the important crops which are below their ten-year averages. The relative betterment of the other important crops above their average is, cotton, 5 per cent, corn 3 per cent, hay 10 per cent, wheat 4 per cent, tobacco 6 per cent, sweet potatoes nearly 1 per cent, apples 25 per cent, peaches 40 per cent, and oats 4 per cent.



Pontiac Culypto.

THE STEVENS BROS.-HASTINGS COMPANY.
Brookside Herd. Liverpool, N. Y.

In the South Central States, also, conditions are favorable, being about 8 per cent better than a year ago, and 2 per cent better than the average. Cotton, the most important crop, has the same condition as the ten-year average. Corn is 3 per cent above the average, hay 8 per cent, wheat 6 per cent, tobacco 5 per cent, sweet potatoes, oats, and rice, each 4 per cent, and peaches 10 per cent, respectively, above their average condition. Apples are 12 per cent below, and potatoes, sorghum, and sugar cane are each slightly below the average condition.

In the far Western States, conditions are not so favorable, being about 5 per cent below a year ago, and nearly 5 per cent below the ten-year average condition. Nearly all the important crops are below the average. Peaches, however, are about 15 per cent better, and grapes slightly better. The approximate extent of deficiency in the condition of other crops is, hay, 8 per cent; wheat, 6 per cent; barley, 8 per cent; oats, 4 per cent; potatoes, 5 per cent, and apples, 1 per cent.—C. C. Clark, Acting Chief of Bureau.

PERSUASIVE.

A rural manufacturer duns his debtors in the following novel manner: "All persons knowing themselves indebted to this concern are requested to call and settle. All those indebted to this concern, and not knowing it, are requested to call and find out. Those knowing themselves to be indebted, and not wishing to call, are requested to stay at one place long enough for us to reach them."—Harper's Weekly.

A bit of sensible advice, applicable everywhere, is given by the Altoona Tribune in its editorial columns, as follows: "The young man who explores the newspapers to take care of his interests when he gets into a dispute with the law should think of all these things beforehand."

Stock yard reports indicate less cattle being fed corn on grass than for years. The very high price of this, as well as all other grain, doubtless has much to do with this.

We would like to sell twenty cows—2 to 7 years old—most of which are coming fresh this Fall, some recently fresh. Every one sound and right in every particular. Tuberculin tested. They are splendidly bred, of good size, great dairy cows, and will please the purchasers. A great opportunity to secure absolutely sound cows that are wonderful producers at reasonable prices.

WASHING PIGS.

Pigs glory in wallowing in the mire, and the most filthy holes provide them with conditions which appear to give them the greatest delight. Some assume that when they roll in the mud they are desirous of getting dirty. I am not so sure of this. Judging from what I have seen, the reverse seems to be the case. No pig I have ever owned has gone on enjoying having a crusty coat on any part of its body. When hampered with such they soon rub and scratch with the object of getting it off, and they find peace and relief in this. I believe they often take to the mucky mud-holes to roll and get the hardened softened. I have always noticed that a pig with a thick layer of dirt on it will roll on the slush much sooner and more often than one that is clean, and I have satisfied myself by practice that pigs that are kept clean are more contented and thrive much better than those that are always on fidgets with an irritating coat. In warm weather they will rush into the pools and streams and have a bath, but there is nothing objectionable in that. How they do enjoy a good scrub and they almost seem to take pride in avoiding dirt afterwards, but the clean skin does not suggest a return to the additional filth. When pigs are being turned out on the clean grass, I would urge that all be scrubbed before they go out. Use a liquid composed of one gallon of hot water, half a pint of paraffin oil, and two ounces of soft soap, when all parasites will be killed, dirt removed and clean, sweet skin supplied. Extra feeding may cause pigs that have come to a standstill to develop more freely, but I can say a good wash whenever necessary, will move them

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Cows' Relief is a chemical compound especially prepared as a specific remedy for the troublesome disorders of the bag and teats. It is a specific preventive and remedy for Caked Bag, caused by garget, injury, over-feeding or calving; Sore or Injured Teats, Spider in the Teat, Stricture, Hard Milkers, Cow-Pox, and similar troubles. It goes directly to the seat of the trouble, relieves congestion, breaks up bunches that interfere with the natural flow of milk, and causes a normal milk-secretion without resorting to constitutional treatment. Cows' Relief

MAKES EASY MILKERS

and is invaluable to any dairyman or farmer for heifers with their first calf, to remove the soreness and swelling that is frequently the cause of kickers and hard milkers. It is a positive preventive and remedy for Spider in the Teat if applied at the first sign of the trouble.

"I try to keep Cows' Relief always on hand. For sores and swelling in cows' bags and teats it is the best thing I ever saw."
B. B. Turner, Broadrun, Va.

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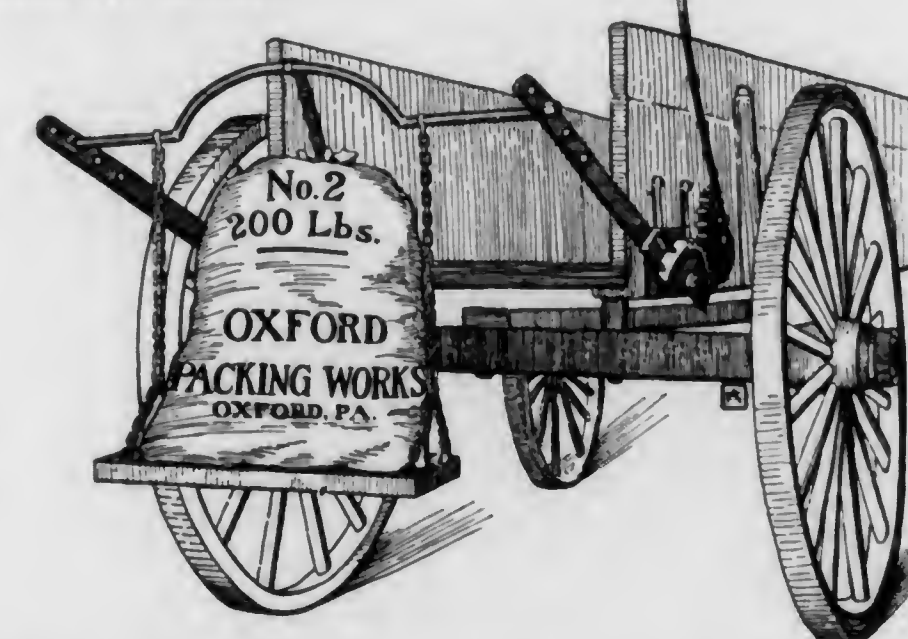
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on wonderfully. I have often admired the pigs shown at the big shows for their skins. What a difference if they were all filth! No doubt much good food is given to them in such prime condition, but the finishing touch is the clean coat, and to this alone I give considerable credit for their superiority.—W. R. Gilbert.

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**Big Fortunes are Being
Made Every Day in
Minnesota Iron Lands**

Yes. Not only big fortunes but little ones. The smaller people are getting "a show" at the great profits. Farmers, merchants, and others who have money in the iron-bearing lands in Crow Wing County, Minnesota, are getting profits in cash that exceed their fondest hopes. These iron-bearing lands are money-makers for those who take out ore. They are situated in the Cuyuna Iron Range which lies along the Northern Pacific Railroad between Deerwood and Brainerd.

End of Ore in Some Old Sections

Although \$1,500,000 in dividends were distributed this year to the stockholders of only one company in Northern Minnesota, still the indications are that the iron ore in older sections is getting scarcer and scarcer every year. New mines will have to be opened in greater numbers than before in other sections. This then is your opportunity. Many consider it the chance of a lifetime.

We control a quantity of iron-bearing land in Township 46, Range 29, Crow Wing County, Minnesota. It is but 3½ miles from Deerwood, a town on the Northern Pacific Railroad, which connects Duluth with Brainerd.

A Rich Strike Nearby

A short distance North of this property a prominent ore company has sunk a shaft and is now mining. In every direction drills have disclosed valuable finds of iron ore. Within 80 rods of this land drills have blocked out forty millions tons of iron ore. The above ore company referred to has offered to supply us with money and take half of the profits. We prefer, however, to develop it ourselves and divide the profits among those who invest with us in this valuable land.

A SAFE INVESTMENT FOR THE SMALL INVESTOR



Selling Prices of Land Near

To give an idea of the remarkable rise in values and to show what the residents in the immediate vicinity think of this section we give the following facts regarding sales of land. Forty acres at Brainerd sold for \$5000.00 cash. This was an undeveloped portion of land—not a drill had been used on it. Mr. A. L. Hoffman a year or two back traded one hundred acres for a stock of groceries valued at \$200.00. This same property sold for \$6000.00 cash. Mr. Hoffman got into the deal, paying \$600.00 for a tenth interest and was delighted to secure the chance. Thus you can see, that property that was worth but \$200.00 a year or two back is now worth thirty times as much. Other pieces in forty acre lots sold for \$3000.00. Another for \$3250.00, and one 180 acre piece sold

for \$9000.00. A few months before this any of these lands could have been purchased for \$15.00 an acre. A widow lady living in Duluth and owning land in this vicinity was offered \$250.00 cash, a royalty of 20 per cent and \$30,000.00 cash as a bonus in case ore is found. This unexpected offer has delighted this woman beyond measure. Many others in the vicinity have had the same pleasant experience. Consequently we believe it will be an excellent opportunity for you to receive good dividends on your investment.

We are an organized corporation, capital \$150,000.00. The price per share is \$10.00 each. Our prospectus and other literature give full description of the property with pictures, guarantees, references, map, and everything that it is possible to put on paper which reflects an honest, straight-forward and reliable investment.

Send for above prospectus quick, ask any question. We will give you an honest, straight-forward answer.

IRON PRODUCING LANDS CO.,
846 Bank of Commerce Bldg., Minneapolis, Minn.

VOLUME XIV

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ALFALFA TESTS IN PENNSYLVANIA.

Many letters have been received by the experiment station from the farmers of Pennsylvania during the last six or eight years pertaining to alfalfa. From these communications it has been learned that many farmers have attempted to grow alfalfa with varying degrees of success.

Numerous trials have been made under conditions that were not at all well suited for the growth of this crop, and consequently many failures have resulted. The object of this bulletin is to give such information pertaining to the cultivation of alfalfa as the experiment station have been able to gather from various sources where careful observations have been made and accurate results obtained. Of these the following is a summary:

First—Under favorable conditions alfalfa yields a most satisfactory crop for soiling and for hay.

Second—Alfalfa should be cut when coming into blossom; if the cutting is delayed until full bloom, the stalks become more woody and very undesirable, and the succeeding growth starts more slowly.

Third—Under average good conditions from 20 to 30 pounds of seed should be sown to the acre.

Fourth—Summer or fall seeding, following thorough tillage, is recommended. Spring seeding is more likely to be choked out by weeds.

Fifth—Deep, well drained soils are best. Do not sow on wet land.

Sixth—Alfalfa thrives in a compact, gravelly soil of good drainage quite as well as in a loose loam.

Seventh—Alfalfa grew best where a heavy application of phosphoric acid and potash had been made.

Eighth—Five tons of manure an acre gave better results than the phosphoric acid and potash contained in 50 pounds of good brand of commercial fertilizer.

Ninth—Turkestan alfalfa did not equal in yield the common alfalfa.

Tenth—Fall-seeded alfalfa on dry land will withstand severe winters of

this climate perfectly; in fact, better than the common red clover.

Eleventh—Where conditions were such as to give the plant a strong and vigorous start, nodules appeared on the roots. Where plants were weak and slow in starting to grow, few of them possessed nodules.

Twelfth—Line has not given satisfactory results. In some instances it has given no appreciable results; in other cases it has been decidedly harmful; in no case was it applied to advantage.

Thirteenth—In several instances the alfalfa withstood the first winter but was completely winter-killed during the second. The larger growth seemed to give no assurance of the ability of the plant to withstand severe freezing if the soil is wet.—Bulletin 75 Pennsylvania Experiment Station.

WAGES AND RETAIL FOOD PRICES.

An investigation of the principal wage working occupations in 4,109 establishments representing the principal manufacturing and mechanical industries of the country showed that the average wages per hour in 1907 were 3.7 per cent. higher than in 1906, the regular hours of labor per week were 0.4 per cent. lower than in 1906, and the number of employees in the establishments investigated was 1.0 per cent. greater than in 1906.

Investigations covering the sales of 1,014 dealers in 68 localities show that the retail prices of 30 principal articles of food, weighed according to consumption in representative workingmen's families, were 4.2 per cent. higher in 1907 than in 1906. As the advance in retail prices from 1906 to 1907 was greater than the advance in wages per hour, the purchasing power of an hour's wages, as measured by food, was slightly less in 1907 than in 1906, the decrease being one-half of one per cent.

Average hourly wages in 1907 were higher than in any other year of the 18 year period, 1890 to 1907, and more

than 20 per cent. higher than the average in any year from 1890 to 1900. As compared in each case with the average for the 10 year period, 1890 to 1899, average hourly wages in 1907 were 28.8 per cent. higher, the number of employees in the establishments investigated was 44.4 per cent. greater, and the average hours of labor per week were 5.0 per cent. lower.

The average price of food in 1907 was also higher than in any other year of the 18 year period, 1890 to 1907. The average price of 30 principal articles, weighed according to family consumption of the various articles, was 20.6 per cent. higher in 1907 than the average price for the 10 years from 1890 to 1899. Compared with the average for the same 10 year period, the purchasing power of an hour's wages in 1907 was 6.8 per cent. greater.

The increase in average hourly wages in 1907 over 1906 was quite general, occurring in 40 of the 41 industries covered by the investigation. The greatest increase was in the manufacture of cotton goods, where the average wages per hour in 1907 were 12.0 per cent. higher than in 1906. In the manufacture of paper and wood pulp the increase was 10.1 per cent.; in eight other industries the increase was five per cent. less than 10 per cent. and in 30 industries the increase was less than 5 per cent. In Bessemer steel, there was a decrease of wages of 0.9 per cent. In the 41 industries as a whole, weighed according to the importance, the increase in wages per hour was 3.7 per cent.

Of the 30 articles of food covered by the investigation 29 were higher in price in 1907 than in 1906. The articles which showed the greatest advance in prices are flour 8.9 per cent.; butter 8.0 per cent.; evaporated apples 7.8 per cent.; milk 7.3 per cent.; corn meal 6.8 per cent.; cheese 6.7 per cent.; and potatoes 5.4 per cent. The only article which showed a decrease is tea, the decrease being 0.2 per cent. The average prices of 20 of the 30 articles were higher in 1907 than in any other year of the 18 year period, 1890 to 1907.

BLOODED STOCK : OCTOBER, 1908

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Important ideas that should receive the close attention of every breeder. Give the contents of this page careful thought. Examine this issue carefully and then write us fully on any idea that comes to you that would benefit our readers.

The reports from all over the country points to sharper competition this year at the shows than ever before. The quality has been up to standard and while the standard rises every year this is so slowly that one hardly notices the difference in the best animals in the course of two or three years, but quite a change can be seen when the best class of today is compared with that of ten years ago. While this is so, one is struck with the fact that the number of these high class animals has greatly increased. Instead of one we find them by the hundreds, and this is a very encouraging point for breeders.

"The best is none too good" is as true today as it was twenty years ago. While one hears on every hand that there is not the demand for thoroughbreds that there was twenty years ago, this is only so among the poorer grades. Competition among the very best is much stronger than it was, and where there was one buyer twenty years ago for the best there are hundreds today. Every breeder is striving to be on top and this creates a much greater demand for the tops. It is this competition and rivalry that has brought the better class of live stock of all kinds on every farm in the country. There can be no backward step and the day of poorly bred animals is past. With the improvement of better stock on the farm comes larger incomes.

In the improvement of live stock we wish to urge upon breeders the necessity of close inspection into the breeding of the animals which they intend to keep throughout the coming year. It is only by having the ancestry of the very best that one can depend with any certainty upon the results to be obtained in the future. The tendency in breeding is always to revert back, and every breeder must keep this in mind when he is making a selection for improvement. We would prefer a good average animal with first-class ancestry ten times over to the show animal that is a "sport" from poor ancestors. The first will produce far better results.

We have received a great many favorable comments upon the change made in Blooded Stock. It is gratifying to know that the change made has met with the general approval of our readers. So far we have had no complaints regarding the advance in our subscription price, which will take effect January 1st. We do not wish to give undue notice to the change and all our old subscribers as well as new ones can have their subscription advanced two years for \$1.00 if sent to us on or before January 1st. Now is the time to have this attended to. Do it at once.

It will be a great pleasure to us to send samples of Blooded Stock for distribution to any person attending public sales or public meetings of any kind. Any subscriptions that our agents may be able to secure for us will be paid for by a liberal commission. We will be glad to correspond with anyone at any time, giving full information regarding our terms to agents.

Owing to change in date of issue of Blooded Stock a number of advertisements did not reach us in time for insertion. Please remember that all advertisements should reach us not later than the 15th of month preceding date of issue. That is, anything for our November number should reach us by the 15th of October and earlier if possible.

Our printing business, which includes letter heads, envelopes, booklets of every description, catalogues, etc., is fast increasing. Persons wishing first class work and the kind that attracts attention and makes sales should correspond with us before having printing done elsewhere.

Every owner of pedigreed stock should advertise their surplus animals in Blooded Stock. A ready sale can be had for them at good prices. Dollars can be made out of a small advertisement that will cost only a few cents. Get your ad. in early for the November issue.

Duroc-Jersey Hogs For Sale



The above pictures are from photos of animals in my herd. I have these kind for sale. A fine lot of Spring pigs ready. Write me at once for prices.

W. F. HARSHMAN,

Thurmont, Md.

TO THE BEGINNER

BY PROF. S. C. PLUMB.

THE young breeder should start right. Having decided to raise pure bred Berkshires, he should make his standard a high one. First, carefully read such literature as may be obtainable upon their history, characteristics, breeding and management. Learn what you can of the different families and individuals that have become famous in the show ring or breeding herd. Study pedigrees so that you may be able to trace the ancestry of an animal, and so know what you are getting in blood lines when you buy. Send to the Secretary of the American Berkshire Association, Springfield, Ill., and secure a copy of the Berkshire Year Book. Get the addresses of some of the best known breeders of Berkshires, and go and visit them and carefully inspect their animals, buildings and methods of breeding, feeding and management. Such visits are an inspiration. At each place take notes of animals of such character as you desire and can afford to buy, and after your inspection is concluded, you will be in a position to buy most intelligently and satisfactorily from among the pigs examined. Never purchase an animal without having first seen him, if you can possibly help it.

Be careful to buy first-class individuals. Remember that the best is the cheapest in the end, if one wishes to establish a breeding herd. Cheap animals are in reality expensive. Be very particular to have a male of high individual merit, and a descendant of stock of character, and if possible of winning blood.

Familiarize yourself with the laws of breeding. Study the works of Darwin on "Animals and Plants under Domestication," and Miles on "Stock Breeding." It is an old, well established law, that "like begets like" in all the families of the animal kingdom. The more perfect the animal the greater the likelihood of it transmitting its quality to succeeding generations. Some of the famous Berkshire boars have achieved reputation, not only because of fine conformation, but also for having power to transmit their qualities to their offspring. This power, known as potency, is a most important one in developing a herd. If the breeding stock lacks it, unsatisfactory results will surely follow. Of two animals the male should be the most prepotent, as his influence extends all through the herd, while that of the female is limited to her descendants only.

Practice vigorous selection, as means of improvement. Remember that the narrow loin, poor ham, thin chest, or any defect in conformation will, in all probability, be transmitted to the next generation, if the animal having this or that defect is used as a breeder. It is a shame that so many inferior animals are used in the breeding herd, and their names enrolled in the herd books. They ought to be converted into pork for the table within the earliest reasonable period of time. A small herd of well selected animals is of infinitely greater credit to the breeder than a larger herd containing numerous inferior ones. Every inferior animal in a breeding herd tends to depreciate the general quality of the exhibition made by the breeder. In fact, high class stockmen who visit a herd of this character, cannot but fail to receive a practical impression. The novice should remember that the application of a practice of judicious selection, has been the means of developing some of the most celebrated herds in the world. When Lord Rivers was asked how he bred such fine greyhounds, he replied, "I breed many and hang many." He only saved the best.

We need more high ideals among the rank and file of those who grow live stock for breeding purposes. A man cannot be a success as a breeder unless he has an ideal animal in mind, the development of which he ever studies to attain. He probably will not produce the perfect animal, but he will take many steps in advance of that average standard which the ordinary man is content with, and above which we should all strive to pass.

The Berkshire has become famous the world over for his superior quality, and this is very largely due to the fact that breeders of great judgment and ability have made use of the correct principles of breeding and thus assisted in establishing the breed.

VALUE IN CROSSING AND GRADING.

As attested by history, Berkshires have been far more used than any other breed in crossing up and grading. Several breeds in England and Ireland owe much of their excellence to Berkshire blood. That excellent and popular breed, the Poland China, had the topstone of perfection put upon it by Berkshires. In Great Britain and Canada they have been used to a greater extent in improving the common stocks of the country than any other breed, and the same is probably true of the United States. Excellence in form, inherent vigor, and purity of breeding, long and carefully conducted, give them transforming power in a remarkable degree. And the intermediate ground which they occupy in size, admits of their being used on common stocks in the production of pigs of a size adapted to any market, when due care is exercised in selection and mating.

Berkshires were Berkshires when other breeds were pups. And Berkshires will be Berkshires when other breeds are gobbled up.



RIVERSIDE FARM, ROSCOE, ILL.

SITUATED IN ROCK RIVER VALLEY AND OWNED BY A. J. LOVEJOY.

THIS Farm was founded in 1840 by the father of the present owner, Mr. A. J. Lovejoy, and is situated in the beautiful Rock River Valley in Northern Illinois, in Winnebago County, just a short ride out from Rockford, Ill. The farm borders on Rock River for a mile and naturally is very picturesque. The present owner was born on this farm in 1845 and spent his early life here, and was always much interested and became so attached to the place that when it was to be sold could not consent to see it pass into strange hands, and after the appraisers placed a value on the farm he purchased it and has occupied it since 1876, when the commencement was made in building up the present business, which is the breeding of pure bred live stock, of which a specialty is made of Berkshire hogs and Shropshire sheep, together with other stock.

From the very smallest beginning and under adverse circumstances the business has grown to an International

type is a long smooth hog with good strong back, good hams, good bone and strong feet, with a short nose and wide face well dished, full of good feeding quality. Such hogs or pigs are always ready for the top of any market at from six months of age on up. Strictly speaking we have been constructive breeders, always striving to attain the ideal, or as near this as we could. We have never been speculators or dealers, but breed from two hundred to three hundred hogs each year and try to grow most of the feed we use. We have a regular order trade, which comes voluntarily from breeders and farmers over the entire country. This order trade has been so well handled in shipping only pigs that prove satisfactory that it grows from year to year. Besides this trade we hold annually a public sale of mature animals along the show yard type and have made these annual sales an event in Berkshire history. These are always conducted on conservative



Berkshire Pigs at Riverside Farm.

trade. Berkshires are sold annually in every State in the Union as well as in many foreign countries. This only goes to show what any young man with a determination and pluck can accomplish by commencing in a small way and growing into a permanent business.

From a start with but a pair of young pigs in 1876, when even the father tried to discourage him, and with the slurring remarks of the neighbors, and many other obstacles to overcome, he stuck to the idea that it would be better to grow good hogs and other stock than to raise scrubs, and to-day is happy to say that he has proved his early convictions.

The name of A. J. Lovejoy & Son is known over the entire country as leading breeders of the famous Berkshire hogs, and the Lovejoy type of Berkshires is the standard type and every one so recognizes this fact. This

lines and no deals or ly-bidding is ever tolerated. These sales are looked forward to as the real establishing of the price for the better class of Berkshires, and while no sensational prices are ever made, a healthy fair average has always been the result. In this way we have been able to annually dispose of all the good pigs we can raise. We have bred many of the world's greatest winners, and for fifteen years followed the great State Fair shows, but for the last fifteen years have made but one or two shows, at which we have had our usual gratifying success.

Our prices are within the reach of every farmer, feeder or breeder, and a square deal is always assured. We are in the business to remain while we are able to run the farm, and it is the hope that the younger generation will continue in the business so well established.

All pictures here illustrated are simply snap shots.



Berkshire Sows at Riverside Farm.

History and Berkshire Swine Facts

BY A. J. LOVEJOY, ROSCOE, ILL.

MR. A. B. Allen says in regarding the history of Berkshire swine, that in 1841 he imported many head of this then well established breed, and says that when he was in England at that time, that a Mr. Westbrook, of Pinekney Green, stated that his father had bred the Improved Berkshire as far back as 1780, and that the breed was still much earlier established than this date. This would go to prove that the Improved Berkshire has been bred in its purity for a century and a half at least.

Origin of the Improved Berkshire—The first attempt to improve the old English Berkshire was by crossing the deep plum-colored Siamese boar on the then reddish brown, coarse Berkshire, and afterward using the white or spotted Chinese boar sparingly, from whence comes the white markings now found on the modern Berkshire. In the earlier days of improvement the color was varied from the brownish tinge to the plum color, with white or sandy markings, which to this day often crops out in certain families of the breed. The rich dark plum color, or as it might be called, a blue black, is not so universally found now as in past years, though the black of the breed today is not a dead black—as in the Essex or other black breeds, but still, generally when in the right light, shows that very rich shade, slightly plum or blueish black. The skin of the Berkshire is also of a very handsome color, being of a reddish plum color to a dark plum. The markings in the earlier days was similar to those at the present time, but not as true to standard, being quite often of a copper shade of white and on from one to two of the feet and legs and occasionally more or less of this color in the tail. These sandy or copper-colored marks of the present day show no reason to doubt the purity of the breeding but rather a "harking back" to the original blood of the early days.

The Berkshire as to Size—One sometimes hears, from those who are not posted, that the Berkshire as a breed are a small breed. There was never a more mistaken idea, for the breed even in its earliest history was a large breed, and Mr. Allen speaks of a boar that he owned in 1840, called Windsor Castle, that measured, when in very thin breeding condition, 6 feet 3 inches in length, and 2 feet 11 inches from ground to top of shoulder, and 3 feet to top of rump, with a heart girth of 5 feet 6 inches. As it is well

known that a well fitted Berkshire will add 4 inches on the top of back more than when thin, this would give a good measurement and great size. Of course certain strains are not as large as others, but to any observing man who visited the St. Louis Exposition could not help but notice that while every known breed was exhibiting at the same time in the arena, and all the same age, that the Berkshire was pre-eminently the largest breed there, and also that it was a breed of the greatest finish and quality.

The Berkshire a Hardy, Prolific Breed—It is well known that this breed is very prolific and very hardy, and are noted for their milk-giving propensities. The average litter is of good size and always full of vitality and vigor, while quite often the litters are too large. We have this season already one sow that farrowed fifteen pigs, and she herself is one of a litter of nineteen. Twelve to fourteen are quite common, and while I like a prolific sow I hardly approve of quite so large litters as these, as we want a litter to make rapid growth and extremely large litters are not generally so large individually, as one of about eight to ten the pigs are very uniform in size and develop quickly, and are ready for market at any time after four to five months of age, and always command the top price in market.

Quality of Meat—All admit that the hams and meat products of a well fed Berkshire is of the highest quality, and that the meat is far better marbled, and that the fat and lean is better mixed than in any other of the breeds. A butcher once remarked that from a half dozen hams of various breeds placed on his table, he could, blindfolded, pick out the Berkshire ham by its firmness and texture by pricking it with a knife.

While as a breed they are very quiet, they are never sluggish, and are therefore one of the best breeds to follow cattle in the feed lot, and are never stepped on by the cattle, owing to the fact that if touched by a steer they will move quickly and get out of the way. As a shipping hog they are not excelled by any, having that ivory-like quality of bone—one is never broken in shipping—and when the ear door opens at the stock yards all will walk out and over the scales without a cripple. Being of such a firm quality of meat a buyer for market can seldom es-



A Farm Team on Riverside Farm.

timate the weight of a bunch of Berkshires, as they invariably weigh much more than they look to do.

Early Importations—Importations were made to this country from England as early as 1823 by Mr. John Brentnall, an English farmer who settled in New Jersey, and in 1832 by Mr. Sidney Hawes, who settled near Albany, N. Y. The breed was also imported from England to Canada in 1838, and Mr. Allen commenced importing in 1841. Messrs. Bagg & Wait imported many in 1839 and disposed of them in Kentucky, Tennessee, Missouri and the South.

the seventies, the Snells, of Canada; Mr. Cooper, of Pennsylvania, and Mr. W. C. Norton, also of Pennsylvania, imported many of the best animals that were ever brought to this country. The Hewers, of Illinois, who were brothers of Mr. William Hewer, of England, also brought out many prize animals from their brother's herd. It was about this time that the greatest activity commenced in the breeding of the Improved Berkshire in this country and it has gone steadily on ever since.

Characteristics of the Modern Berkshire—The modern Berkshire should have good length of body, stand on straight medium length legs, with good strong feet, straight in the pasterns as possible, a well filled side, good hams, good back, a little arched than otherwise, and a neat, short, well dished face with eyes wide apart denoting a good feeder and a quiet disposition. The coat should be, in the female, fine and smooth, well laid and free from coarseness, while in the male a little more coarse coat is permitted and denotes a strong constitution. The ears should not be too large and set at an angle of about 45 degrees from the head and with age somewhat more drooping. The appearance should be spirited and show a breezy, stylish carriage, denoting thorough breeding. There is that something about a modern typical Berkshire, that as he walks down the line in his proud, majestic bearing, catches the eye of the lover of the beautiful. Such a showing of breed, type and blood-like appearance is seldom seen in any breed of animals, and all will admit that he is without a rival in quality and finish, as compared with other breeds.

Selection of Breeding Animals for the herd—Much care should be taken in selecting proper animals to constitute the breeding herd. The sows should be selected with a view to their producing quality rather than to the show type only. Often the heaviest show sow in the bunch is not the one that produces the best animals. She should be a little long in body rather than too short and have a breezy, motherly appearance about her that is distinguishable at a glance. She

should have good feet and legs, short pasterns, a full, deep, side and a good strong back a little arched that with age and weight will never sag, a neat, refined appearance about the head and a short, well dished face with eyes wide apart, noting a quiet disposition and an easy feeder. The boar should be along the same lines, only that he may be more compact and thick in his general makeup, and he must show much of a masculine character in general. He should have strong bone and feet with short or medium length of leg, with a full, strong back and good wide ham, his legs

to be straight and well apart, and stand on tip toe if possible. With such a selection and mated these should produce the very best type of the modern animal of the breed.

The Breeding Season—At the beginning of the breeding season the sows should be in just the right condition for best results, better to have them in only moderate flesh and gaining a little when coupled, and when bred it should be about 36 hours after coming in heat and some hours after being fed, no being best to breed just after feeding. Care should be taken that she is not excited or heated from driving or taking her to the breeding pen. She should be given but one service, then left to herself for a few hours, and better yet if till she goes out of heat, then the date of service should be taken down and she should be tried again in twenty-one days. The boar should be in good strong breeding condition and should be fed a ration strong in protein or muscle forming food, such as ground oats or corn and ground oats together with shorts or bran added, and he should be kept in a pen with good sized yard attached where he can have plenty of exercise. He should not have but one sow per day and only the one service, which is better than more.

When to Commence Breeding the Sow—While we believe that the sow will develop better not to breed till about a year old, still it is a question if we would not have less trouble in getting sows to breed readily if we bred them at eight months of age and then keep them at it at least for two litters a year after the first litter was weaned. We often have quite a little trouble in getting sows that have been pushed along and kept in high flesh till a year to fourteen months old to stand to first service, yet we know she should not be in such high condition, but when breeders are coming every day almost to the farm

one must keep his sows in good presentable condition or the visitor will not be pleased, much as he may know that this is not for the best, he will invariably select the fattest sow in the lot. The hog should be treated as the best paying thing on the farm, which he really is.



Model Hog House Used on Riverside Farm.



Climax, a Son of Masterpiece.

Future of the Dairy Farm

BY HORACE L. BRONSON, CORTLAND, N. Y.

WHAT shall it be? Are the next twenty years to be a repetition of the past twenty years? This question is fraught with tremendous interest to millions of dairymen throughout our union. The issue is no longer confined to the eastern and middle States, but is as broad as the map of our country.

Changed conditions have brought this condition to the front. It is commanding greater attention now than ever before. Time was when the matter was of vastly less importance; when land was cheap, help abundant, wages low and ready market for all farm products. We have today the ready market. The price for butter, milk and cheese has been most satisfactory for the past few years. On the other hand this advance in the price of milk products has been more than offset by the increase of wages, scarcity of good farm help and an increase of about 100 per cent in the price of dairy foods.

With the facts before us the gravity of the situation is manifest. From 1880 to 1890 the average value of the nation's farms and farm equipment nearly doubled in value. Considerable of this increase can be attributed to the general adoption of modern machinery and improved farm equipment. But aside from this there has been an immense value in the value of farm lands, especially for the past five years.

It has come to pass in certain sections of the country that it is next to impossible for the land owner to secure competent and faithful help at any price. Just now we are undergoing a financial depression. Thousands of operatives are without employment. So acute is the situation that there is actual want and suffering among the army of unemployed. But fortunate for them, and the landlords as well, these men refuse to leave the cities and accept good wages in the country.

The question arises—can the dairyman meet the changed conditions and produce milk and its products to a profit? Surely not by the old methods. The days of slipshod, haphazard farming are numbered. Every man who ignores or is inensible to the changed conditions in his business must sooner or later fail. To succeed now he must produce dairy products at less cost. To accomplish this several things must occur.

First: He must get a larger net yield from his dairy. Instead of keeping the cow that makes only 2,500 quarts per year, he must keep those that produce not less than 3,000 quarts. Instead of paying high priced help to care for the stock and high priced feed to maintain 40 scrub cows,

he must cut the number to 20 and this without reducing his gross receipts. In this way he can cut his feed and labor bill nearly in half. In this connection please note that it costs about \$30.00 to keep a cow for a year, even if she does not produce a quart of milk for the entire season. It will cost about fifty dollars to keep another cow that will produce \$150.00 per year.

In the past the dairyman has staked his all upon the milk checks. The cow's offspring has been practically valueless. The grade calves have gone for veal. If the owner raised them they would usually cost all they would bring in open market. That is the old way, but not the best. Why longer follow it?

There is a ready and growing market for registered Holstein cows and their offspring—cows that will pay for their keeping and make a handsome profit for the owner. Why not take advantage of this opening? Why not keep cows that will produce from \$100 to \$150 in milk annually, and in addition to this present the owner with a valuable

calf to supplement the milk check? There is no valid reason for adherence to old methods. The only objections that are made at first, by the uninformed refusing to accept official records of thoroughbred cows as authentic; second, those who consider that thoroughbreds cost too much. These latter say "They can't afford it." Yet they can buy new bugles to drive to town in, pianos for their homes,

phonographs, expensive furniture, etc., things that do not contribute a dollar to the income. Why then should these farmers refuse to replace unprofitable cows with thoroughbred money makers? Why should they slave to support "star boarders" when good cows will work for and support them. In this connection I have compared a statement showing the comparative earnings of a grade and a thoroughbred Holstein cow for one year.

The average production of grade cows per year is about \$30.00. The cost of keeping not less than \$20.00. Net balance of \$10.00, or less. In a great majority of cases it is less.

Segis Inka McKinley, No. 60411, born August 26, 1902, produced within a period of twelve months, over 8,000 quarts of milk. At 3 cents per quart it would give her a credit of \$240.00 for her milk. She dropped a heifer calf, sired by Aaggie Cornucopia Pauline Cow, son of the four-year-old champion cow of the world. We would not sell this heifer calf for less than \$2,500. That gives Segis Inka McKinley a credit for the year of \$2,740.00. She con-



Three Famous Holstein Cows Owned by Horace L. Bronson, Cortland, N. Y.

sumed all told, during the year, \$55.00. This left a net balance of \$2,685.00.

Now compare this with the results obtained by Prof. M. J. Frazer, of the Illinois Experiment Station. He demonstrated by actual tests with 554 Illinois cows that 25 good cows returned to the farmer identically the same profit as 1021 poor cows. In other words, one good milking cow brought as much profit as 40 poor ones. This was confined to grades, taking the two extremes—best and poorest.

This article is not written to boom any particular breed. The writer prefers registered Holsteins because he has found them most profitable; but let each individual select that breed which pleases him and is best adapted to his immediate environment. The point emphasized is to keep registered stock only. Thus secure a double income each year.

I would advise before purchasing that the buyer get definite information, duly authenticated, as to the breeding and producing capacity of the animals offered.

Another suggestion in favor of keeping only pure bred cattle is that success in any undertaking depends largely upon the enthusiasm and hustle of the owner and his help. No man of sense is going to enthuse very much over a cow that will only give ten quarts of milk in 24 hours. The same man and his hired hand will cheerfully set up until 11 p. m. for the third milking of a cow that is filling a 40-quart can full of milk every 24 hours. Every man would like to get fair compensation for his work. If he does he is satisfied. Toil is no longer drudgery but a pleasure.

I also advise, so far as possible, providing houses for the help. The most desirable laborers today are the married men. A neat tenement house, spacious garden and well kept lawn all contribute to the pleasure of the workman and his family. Insensibly, perhaps, he regards this as his home, and for all practical purposes it is. The starving man will gladly give up his title deeds for food. A man dying of thirst will cheerfully give his all for a glass of water. The millionaire dying from overwork and nervous exhaustion will exchange his wealth for a humble cottage, if by so doing he can save his life. The man in possession is the man who really gets the good

of the property. In other words, record titles do not give happiness. It is the free and unrestricted use of life's pleasures that carries contentment and lasting pleasure. The landlord will get well paid for all that he does for his help. I believe that in co-operative employment there would be less complaint of shiftless help, of indifference to the master's interests, of broken contracts, and of insubordination and recklessness. From a social standpoint co-operative employment would be a boon, and who would say from a business standpoint it would be any less successful? If every landlord could have his help take the same interest in his business as himself, it would result in increased income and increased savings, amounting to far more than the 10 per cent net profits. I intend to give this last proposition a fair trial at Star Farms.

"The Separator News," published by The Sharples Separator Company, West Chester, Pa., is being sent out to readers—the Autumn edition is 900,000 copies.

In this issue of "The Separator News" is more than the usual variety of sound dairy counsel, from many different sources. Farm separating, of course, occupies a prominent place in the discussion, because farm separating is the policy which is most promising and most helpful towards farm improvement everywhere, and practically brings more money regularly into dairymen's hands than any other branch of agricultural industry.

What forehanded and enterprising dairymen are doing is told in many ways. The possibilities for enlarged money making in the dairy are presented in facts and figures. A new bird's-eye-view of the office and factory at West Chester is shown for the first time. Offers of souvenirs, including a new book just being published, the words and music of over forty favorite songs, will appeal to every music lover. Another piano offer for purchasers of Tubulars, during the year, July, 1908, to July, 1909, is made and a brief narration of the awarding of the first piano, in January last, is printed.

"The Separator News" will be mailed, prepaid, to those who ask for it. Write to The Sharples Separator Company, West Chester, Pa., and mention Blooded Stock.



Guernseys Owned by Ex-Governor W. D. Hoard, Fort Atkinson, Wisconsin.

PROFITABLE DAIRYING

THE old saying that "Rome was not built in a day" applies to most everything on this earth—because nothing worth while is accomplished in a flash; everything requires some time—it may be but a minute; nevertheless that full minute must be utilized to accomplish the best results.

The same applies to the dairy—time and care must be spent to get the best results, for in the dairy there is no place for slovenliness, overhanging dirt, underlying filth, or stagnation, mouldy or spoiled feed, a club, a cur dog or an oath.

DAIRY STATION.

In every State working under the Agricultural Department at Washington, there is an Experiment Station and that station makes official tests of dairy cows in order to have unprejudiced records as to milk production of animals in advanced registry; thereby aiding the development of higher breedings.

Those stations point out to the dairy farmer the proper course to pursue to gain success with his herd, because dairying can be readily and profitably combined with any of the other lines of agriculture without any bad results; and it gives continued regular employment to all the members of the farm, both old and young.

Besides furnishing the best and greatest number of by-products for the raising of hogs and calves, and yielding a sure and steady income, the greatest point in favor of dairying is, that it takes less fertility of soil and yet provides a large quantity of fertilizing material.

The old saying "farming doesn't pay" is obsolete with farmers who are realizing the wonderful advantage and profits to be gained by dairying.

Those who make the most out of dairying follow closely the suggestions of the Experiment Station—hence referring to a bulletin issued by the Purdue University Experi-

ment Station—we note that the butter lost in skim milk from one cow in one year is as follows:

Water dilution.....	49.5 pounds
Shallow Pans.....	26.2 pounds
Deep Setting.....	10.1 pounds
Hand Separator.....	1.2 pounds

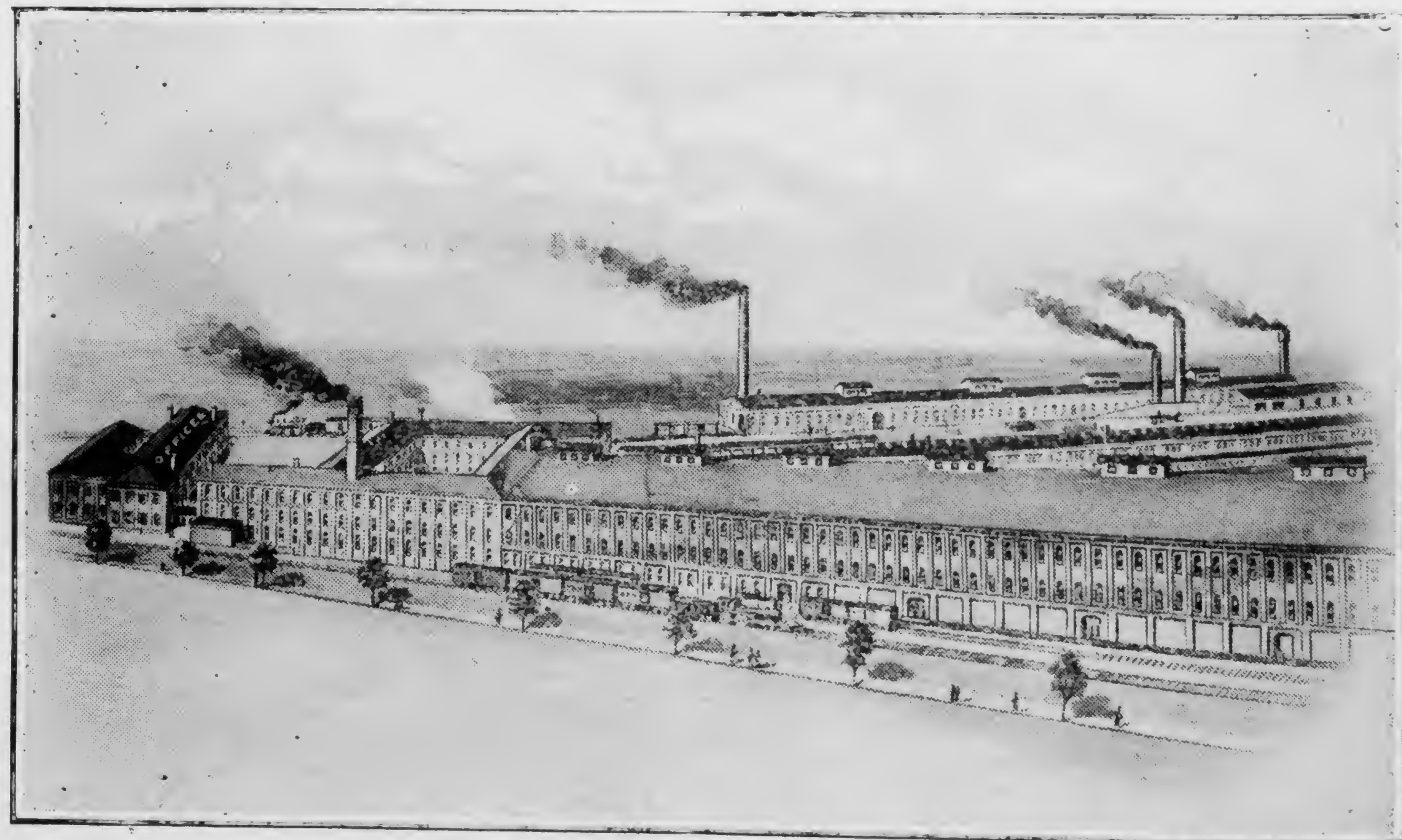
Thus at a glance you can see that the loss incurred by not having a separator is from 9 to 40 pounds per cow in one year.

Many men object to dairying because of the work(?) Well—what on the farm doesn't entail work of some kind, **COWS SHOULD HAVE GOOD CARE.**

The Minnesota Station says "a cow or perhaps cows, are not considered worthy of the attention of the 'boss' himself, so it becomes the much-hated task of the hired man, the boys, or the girls, or yes, very often the wife, to milk the cow and see to it that the old thing gets at least part of her wants supplied. This chore is not often done for love, nor the fun of it, but is a drudgery bound to befall the weakest member of the family. The consequence is evident. Bossy becomes subject to all kinds of neglect and abuse. The sunny side of a snow bank or barbed wire fence looks good to her compared with some of the treatment she received in the barn. Carried with the milk-stool, half starved, bug bitten, mangy and dirty, she stands pinioned to a stallion or tied to a deep manger.

The words she hears are those of command emphasized with a kick or a bump. Altogether her treatment should entitle her to some degree of pity. She can't help it that "farming doesn't pay" when kept under such conditions. Give her a warm, light, clean, comfortable stall, an abundance of good feed and water, kind and regular care and then see if "farming doesn't pay." If it doesn't there is something wrong with your cow.

Most farmers do not appreciate the difference between



Birds-eye View of the Sharples Separator Works, West Chester, Pa.

good and poor cows. Neither does the sire of the herd get his share of attention. He should be the best that can be procured. A sire from some of the dairy breeds will be more apt to stamp his good qualities on the offspring than one of mixed breeding. A few generations of breeding to a good full blooded sire with dairy type will do wonders in improving the herd."

WHY A SEPARATOR.

The difference in the efficiency of skimming between the hand separator and the gravity system is ample to show the inferiority of the gravity methods, and it would be still greater had an attempt been made to skim as rich cream with the gravity system as with the hand separator. For butter making, cream containing from 30 per cent to 40 per cent of butter fat is most suitable. It is difficult, with the gravity system, to produce cream testing as high as 30 per cent of fat or over without a material increase in the per cent of fat lost in the skim milk. The thicker the cream skimmed by gravity the more fat is lost in the skim milk. The thinner the gravity cream the more com-



Separators, yet always perfect lubrication.

The Tubular bowl being suspended and bottom fed necessitates the milk passing but once through it, and the centrifugal force it generates skims to a trace. The milk passing through the bowl but once only needs a simple mechanism to assist it—and for that reason the smooth, simple dividing wall on the inside of the Tubular bowl is the result. The bowl is the simplest made and can be cleaned in two or three minutes. The supply tank on the Tubular is waist low—the bowl being bottom fed allows it to be, and because of that the supply tank is easy to fill—no straining of muscles.

All parts of the Tubular are interchangeable, and can be secured at any time direct from the factory or from sales agents everywhere. Proofs of the quality of the Tubular are the recommendation of every day users—they are found everywhere; but let us not forget to mention that the Tubular is backed by 29 years of Separator experience.

A full knowledge of this Separator can be had from catalog—sent free for the asking. Address The Sharples Separator Co., West Chester, Pa.



FEEDING CALVES

TWENTY head of grade Shorthorn and Hereford calves were purchased by the Kansas Experiment Station in the spring of 1900, and divided into two lots. One lot was fed on sterilized creamery skim milk, with a grain ration composed of equal parts of corn and kafir corn meal, with all the alfalfa hay they would eat. The second lot was fed the same as the first, except that fresh milk was used instead of skim milk. In addition to these two lots, the station secured the privilege of weighing 22 head of high grade Hereford calves which were running with their dams in a pasture near the experiment station.

Result With Skim Milk—For the 22 weeks under experiment, the 10 calves consumed 24,736 pounds of skim milk, 1,430 pounds of corn chop, 1,430 pounds of kafir corn meal, and 641 pounds of alfalfa hay. The total gain was 2,331 pounds, or a daily average of 1.51 pounds per head. Figuring skim milk at 15 cents per 100, grain at 50 cents per 100 pounds, and hay at \$4 per ton, the total feed cost of raising these calves was \$52.68, or \$5.27 per head. The feed cost for each 100 pounds of gain was \$2.26.

Cows that are milked will produce larger yields than when suckling calves. According to the average yield at this station, 10 cows (one for each calf) produced 55,540

plete the skimming.

The use of the hand separator in place of the gravity system of creaming will effect a saving of at least \$10.00 more per cow in one year; and with the hand Separator a richer cream and a better quality of cream and skim milk can be produced than with the gravity system.

WHY THE TUBULAR SEPARATOR?

Throw a stone to the sky and it returns to the earth—due to the force of gravity, and the Tubular follows that law, by having the bowl suspended from a frictionless ball bearing—in other words—the heavy side down.

The Tubular is manufactured in the largest Separator factory in the world, and is built by skilled mechanics, who aim to gain Separator perfection, and their efforts are greatly rewarded by the first class Separator they turn out.

The simplicity of the Tubular stamps it the ideal Separator for all dairies. The method of oiling is very unique; there is not an oil cup, nor oil hole, nor oil valve in it, therefore, no dripping or weeping of oil, no waste, no oil can be needed—less than one-fourth the oil needed for other

Separators, yet always perfect lubrication.

The Tubular bowl being suspended and bottom fed necessitates the milk passing but once through it, and the centrifugal force it generates skims to a trace. The milk passing through the bowl but once only needs a simple mechanism to assist it—and for that reason the smooth, simple dividing wall on the inside of the Tubular bowl is the result. The bowl is the simplest made and can be cleaned in two or three minutes. The supply tank on the Tubular is waist low—the bowl being bottom fed allows it to be, and because of that the supply tank is easy to fill—no straining of muscles.

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pounds of milk, testing 3.93 per cent butter fat. With butter fat at 15½ cents per pound, this would amount to \$338.52. The value of the skim milk not needed by the calves would raise this to \$374.24. Deduct from this the value of the feed consumed by the calves, and there remains \$321.56, or \$32.15 per calf, to pay for the expense of milking, feeding the calves and hauling the milk to the creamery. At 12½ cents per hour, this expense need not be half of the above sum, leaving \$15 to \$16 clear profit for each calf raised on skim milk.

Result With Whole Milk—During 22 weeks these 10 calves consumed 23,287 pounds of fresh milk, 835 pounds of corn chop, 835 pounds of kafir corn meal, and 835 pounds of alfalfa hay. The total gain was 2,878 pounds, or a daily average of 1.95 pounds per head. Charging butter fat at creamery prices, the feed cost of raising these calves amounts to \$150.19, or \$15.72 per head. The feed cost for each 100 pounds of gain amounts to \$5.46.

This experiment shows that the feed cost of raising a good skim milk calf need not exceed \$5.25, in contrast to \$15.75 for the whole milk calf. The skim milk calf becomes accustomed to eating both grain and roughness early in life, is handled enough to be gentle, and when transferred to the feed lots is ready to make rapid gains.

CARE OF MILK IN THE HOME

GEORGE M. WHITAKER, INSPECTOR DAIRY DIVISION, UNITED STATES DEPT. AGRICULTURE.

CLEANLINESS and cold are essential in having whole some milk. Milk absorbs impurities whenever it is exposed to the air or placed in unclean vessels. The amount or degree of this contamination depends on the cleanliness or the air and of the utensils; even the air of a so-called clean room contains some impurities. The bacteria which get into milk from the air or vessels increase rapidly as long as the milk remains warm—50 degrees or above; they are dormant, or increase slowly, at lower temperatures.

Cleanliness and cold are imperative if one would have good milk, although if it is consumed so soon after production that the bacteria in it do not have time to increase much—say two or three hours—the importance of cold is lessened. If the producer and the dealer have done their duty, there is daily left at the consumer's door a bottle of clean, cold, unadulterated milk. It may then become unfit for food—especially for babies—by improper treatment at home. This bad treatment consists (1) in placing it in unclean vessels, (2) in exposing it unnecessarily to the air, (3) in failure to keep it cool up to the time of using it.

The above expression, "a bottle of clean, cold, unadulterated milk" is used because the best way of delivering milk is in bottles. Dipping milk from large cans and pouring it into customers' receptacles on the street—with all the incident exposure to aid not always the cleanest—is bad practise—Drawing milk from the faucet of a retailer's can is almost as bad as dipping milk, for though the milk may be exposed to the street air a little less than by the dipping process, it is not kept thoroughly mixed and some consumers will receive less than their proportion of cream.

If situated so that it is impossible to get bottled milk, do not set out over night an uncovered vessel to collect thousands of bacteria from street dust before milk is put into it. Have the milk delivered personally to some member of the family if possible; if not, set out a bowl covered with a plate, or, better still, use a glass preserving jar in which nothing but milk is put; use the jars with glass tops, but omit the rubber band.

Take the milk into the house soon after delivery, particularly in hot weather. Sometimes milk delivered as early as 4 a. m. remains out of doors until 9 or 10 o'clock. This is wrong. If it is inconvenient to receive the milk as soon as it is delivered, provide a sheltered place in which the milkman can leave it. Never allow the sun to shine for any length of time on the bottle of milk.

Put the milk in the refrigerator on receiving it and keep it there on ice when not using from it. Milk can not be properly kept without ice.

Keep milk in the original bottle till needed for immediate consumption; do not pour it into a bowl or pitcher for storage; do not pour back into the bottle milk which has been exposed to the air.

Keep the bottle covered with a paper cap or an inverted tumbler as long as milk is in it and when not actually pouring from it; after opening a bottle and removing a part of the milk do not leave the bottle uncovered.

Milk deteriorates by exposure to the air of pantry, kitchen, or nursery. Do not expose uncovered milk in a refrigerator containing food of any kind, not to mention strong smelling foods like fish, cabbage, or onions. An excellent way of serving milk on the table, from the sanitary standpoint, is in the original bottles; at all events pour out only what will be consumed at one meal.

When milk is received in a bowl instead of a bottle, observe the spirit of the above paragraphs. Keep the bowl covered as directed for the bottle. Expose uncovered milk to the air of any room as little as possible. Do not expose it at all in a refrigerator.

Keep the refrigerator clean and sweet. Personally inspect it at least once a week. See that the outlet for melted ice is kept open and that the space under the ice rack is clean. The place where food is kept should be scalded every week with sal-soda solution; a single drop of spilled milk or a small particle of other neglected food will contaminate a refrigerator in a few days.

As soon as a milk bottle is empty, rinse it in lukewarm water till it appears clear and set it bottom side up to



The kind of Cattle that are Valuable in the Chicago Meat Markets.

drain. Do not use it for any other purpose than holding milk. Never return filthy bottles.

All utensils with which milk comes in contact should be rinsed, washed, and scalded every time they are used. Do not wash in dish water or wipe with ordinary dish towel; boil in clean water and set away unwiped.

When a baby is bottle-fed, every time the feeding bottle and nipple are used they should be rinsed in luke-warm water, washed in hot water to which a small amount of

washing soda has been added, and then scalded; never use a rubber tube between bottle and nipple.

If a case of typhoid fever, scarlet fever, or diphtheria breaks out in the family do not return any bottles to the milkman except with the knowledge of the attending physician and under conditions prescribed by him.

Milk fresh from the grocery store or bakery which is kept in a can, open much of the time, possibly without refrigeration, is to be avoided.

PURE BRED STOCK

WE look forward to the day, still well in the future, when pure-bred stock will supplant scrubs, mongrels and, for the most part, grades. It may never entirely supplant straight cross-breds or high-grades, for a first cross often produces a most profitable animal to feed, and doubtless a certain amount of crossing and mingling of blood will always be done, but the stockmen's missionary work must continue until no one thinks of using any but pure-bred sires, and until the great majority of breeding females in horses, cattle, sheep and swine are either pure-bred or else first-crosses or high grades. In swine this goal has already been attained in most districts, thanks to the fecundity of the sow; in sheep, it is within measureable approach, but among horses and cattle it will be some time yet before pure-breds are so generally disseminated as they should be. When pure-breds become as common as grades now are, the tendency will be to reduce prices, though not the value, of the average run of pure-breds, thereby lessening the temptation to palm off inferior individuals on the strength of registration. Then only those registered animals which combine superior individuality with rich breeding will command a premium by virtue of their pedigrees. The business of distributing seed stock will not be confined, as at present, to a few breeders, but every farmer will stand a chance of producing an animal of rare value for purposes of stock improvement. At present, with grades chiefly in vogue, no matter how superior an individual male animal may occur in a farm stud or herd, he is of little value for stock improvement because lacking the concentration of blood lines which tends to insure prepotency in the transmission of his good qualities. Even if he prove an exceptionally

good sire the breeder of pure-breds dare not use him, since his get would not be eligible for registration. Thus, many a jewel in farm stables is passed by, which, if a registered pure-bred, and, therefore, available for the purposes of the pure-breeder, would prove an acquisition to the cause of stock improvement, and incidentally a source of profit to the farmer who raised him. The more plentiful the pure-breds in the country, the more rapidly and thoroughly may the cause of live-stock improvement advance. At present the number of pure-breds is so small, comparatively speaking, that the business of breeding them is inconvenient and expensive; and this, together with the expense of registration and selling, and the obvious need for blooded stock in almost every community, tempts the breeder to distribute for breeding purposes registered stock which never should be allowed to perpetuate its kind.

Among pure-breds, as among scrubs, close culling will always be necessary to maintain, let alone to advance, the standard of merit; and the fact that this has not always been practiced accounts for the inferior showing, from a utility standpoint, which the poorer class of pure-breds often make in competition with high-class selected grades. For practical purposes, a high-class grade is more valuable than a medium pure-bred, but a good pure-bred is better than an equally good grade, in that the descendants of the former, if bred pure, will have the prepotency to transmit their excellencies with greater certainty. This fact of prepotency, due to concentration of blood lines and tendencies, is the sole and only reason why pure-breds are so necessary for the improvement of the general stock of the country.

We do not anticipate that the best stock will become



A Pair of Devons, Winners at the St. Louis World's Fair.

uniformly distributed among the rank and file of farmers. Doubtless, in future, as in the past, the cause of stock improvement will be served by those few men of enterprise and genius who make it a point to assemble in their stables some of the best stock of richest blood lines, and, by intelligent selection, skillful mating, and favorable environment, to produce masterpieces of the breeder's art, just as in swine we still have our noted breeders, notwithstanding the plenitude of pure-breds throughout the country. But, as in swine, so in other stock, the work of the leading breeders, while not less profitable to themselves, will be much more advantageous to the country when they can draw freely for their studs and herds upon the specially choice specimens occurring here and there among a large number of pure-breds kept throughout the country, and when they will no longer be tempted to sell for breeding purposes everything that claims a pedigree certificate.

Of course, the student of this question must realize that one practical difficulty in the way of utilizing animals from commercial herds, even though pure-bred, will be the fact that many stockmen, keeping pure-breds for every-day

purposes, would refrain from recording their stock; so that, after several generations had passed without registration, it might be difficult, under existing herd and stud book rules, to enter ever so deserving a beast. This could and doubtless will be met in time by a judicious relaxation of rules to allow the inclusion of meritorious candidates of evidently pure-breeding. Even were a dilute strain of alien blood occasionally filtered in through such channels, it would doubtless do the breed more good than harm.

The scarcer the supply of desirable pure-bred stock, and the more narrowly its ownership is limited, the greater the cost of pure-bred sires to the general farmer; whilst, on the other hand, the more abundant the supply, the more general the distribution, and the more closely the breeding of pure-bred stock is brought down to an every-day commercial basis, the higher the standard of merit will be raised, the less will be the cost of production, and consequently the selling price of serviceable breeding males. Wherefore, we see that the general dissemination of pure-bred stock over the country promises substantial betterment of live-stock interests, particularly to the dairyman and the raiser of market stock.—Farmer's Advocate.

KANSAS HAS MODEL DAIRY FARM

NO other line of farming interests has attracted so much attention in recent years as dairying. As land increases different methods of farming must be employed than those practiced on cheap land. If dairymen in Holland can on \$1,000 land, buy American feed and then ship butter to America and still make money, certainly Kansas farmers ought to prosper on \$50 and \$100 land, when they can raise corn, clover and alfalfa, the best dairy feeds in the world, and sell on a good home market.

The dairy department of the Agricultural College is working on some very practical lines. Professor Kendall has started a "model dairy farm" on 42 acres of land and will work out two experiments, one to balance the other—to determine the cheapest method of feeding dairy cows, and to see how many cows may be maintained on that much land.

The experiment proper will begin with July. The dairy herd has been reduced somewhat and Professor Kendall wishes to build up the herd largely with Guernsey and Ayrshire breeds, as he deems them hardy and adapted to Kansas conditions, and also excellent dairy breeds.

The entire 42 acres has been in blue grass and 18.1 acres have been plowed and these plots will be used as follows:

Plot 1—6.6 acres for corn silage.

Plot 2—3.5 acres for corn for soiling (feeding as cut).

Plot 3—3 acres for cowpeas for hay.

Plot 4—5 acres for later corn silage.

From 11.6 acres he expects to have enough silage to

fill two 80-ton silos. As he cuts the corn from plot 2 he will sow part to Kaffir for later soiling and part to cowpeas, sowing all of this plot to alfalfa in early September. A part of plot 1 or 4 will be sowed to alfalfa and next year five acres will be taken from the 24 acres of pasture and put in corn for silage. The idea is to limit the pasture area and add to the acreage for soiling, ensilage and alfalfa. The farmers of Kansas will be surprised at some of the results to be obtained from this experiment.

It has been necessary this year to buy 24 acres of alfalfa from nearby farmers, and this being cut and put in sheds. A new alfalfa shed is to be built for the later cutting. It will be 34x60 feet with a 12-foot driveway. Several experiments will be conducted in the shedding; cost of unloading and mowing by hand, pitching from sides and from driveway, swing fork and with track from end of shed; also test as to keeping quality of hay put in the mow green; from cocks with and without caps. Old railroad ties will be laid on ground across shed and long poles lengthwise of shed across the ties.

A lean-to roof will be attached to south side of hay shed and the cows will eat from shed under this shelter in early fall, through movable racks, gradually eating into the mow, the ties and poles being removed as necessary for the whole length of shed, thus keeping a north protector for the whole winter. The shed will be sided on the north.

Tests are being made by patrons of the creamery in different methods of handling their cream, cooling, etc.



All cream is bought by the college creamery on a grading system, a certain price for the first grade, two cents less for second grade, and six cents less for third grade. It is being proved to the patrons that it takes but little trouble to get all first grade and that they get a big price from their labor in this difference. Cream is bought regularly from patrons within 20 miles of Manhattan and any farmer may ship occasional cans or all his cream for a short time to the creamery for testing or to learn the advantages of the grading system. His cream is carefully and accurately tested and he is paid according to test, but on the basis of New York prices. No quotations are made, however, in advance. The farmer will get a statement of the test and if he desires it, suggestions for improvement of his product will be made.

For the purpose of helping the actual buttermakers of the State, Professor Kendall has inaugurated a buttermaking contest. Each buttermaker ships here a tub of butter; all butter is scored carefully, and the one having the best score receives a certificate. At the end of the year the buttermaker having the highest average score will receive a beautiful silver cup from the State Dairy Association. All butter is sold and proceeds remitted to buttermakers.

These are only a few of the many experiments now being conducted by the dairy department of the Kansas State Agricultural College for the advancement of dairying in Kansas. It will be impossible to do the highest type of work, however, in either experimental or instructional lines with the present small dairy building and the poorly planned dairy bary.

Cotton Seed Meal for Dairy Cows

THERE is a prevailing belief that when cotton seed meal is fed for long periods in quantities exceeding four pounds per cow daily the health of the animals will be more or less injuriously affected, but in a series of experiments which they report it was found that cotton seed meal may be fed in conjunction with good corn silage to the extent of from five to six pounds per cow daily without affecting the health of the animals. Indeed, such a ration appeared to keep the cows in an unusually good state of health. A ration consisting of cotton seed meal and good corn silage was consumed by the cows with great relish, which in no way lessened when the feeding of such a ration was continued for a period of five months.

No bad effects were noticeable from the practice of feeding cotton seed meal and corn silage separately. On the contrary, such a practice appears to have distinct advantages over the common practice of mixing the meal with the roughage. Our results, therefore, tend to disprove the prevailing belief that heavy concentrates like cotton seed meal will act detrimentally on the health of cows when fed unmixed with more bulky feeds.

Cows fed exclusively on cotton seed meal and corn silage for a period of five months exhibited no craving for dry roughage, but always preferred silage to good hay. According to the herd records, the cows yielded more milk and butter fat during this experiment than during any corresponding period in previous years. Cotton seed meal and rich, well-matured corn silage constitutes an excellent ration for cows yielding from 20 to 30 pounds of milk daily.

These results are of special importance, because cotton seed meal and corn silage form by far the cheapest dairy feeds available to dairymen in South Carolina and elsewhere in the South. It is stated that the cost of such a

ration is only slightly more than half that of the common dairy ration now fed in the State.

The good results obtained in these experiments in the exclusive feeding of cotton seed meal and corn silage as a dairy ration was attributed largely to the fact that the corn silage was made from well-matured corn rich in grain, making it especially rich in carbohydrates, for it is explained that unless silage is especially rich in grain a ration consisting entirely of corn silage and cotton seed meal will be deficient in non-nitrogenous matter (carbohydrates).—Bulletin of South Carolina Experiment Station.



Portrait Lady Ratho, belonging to Mr. J. W. Dent, Stanhopegate, Middleton in Teesdale; winner of prize at Middleton in Teesdale Show, given by The Country Live Stock Insurance Association, Clifford street, York. Also winner of seven 1st, two 2nds and one 3rd in 1907.

The fat contained in food stuffs can only serve as a fuel or energy producer, or to build tissues. Fatty tissues furnishes potential energy and is a reserve fuel supply for the animal. Protein may also in a case of need serve as an energy producer, and may be used to form fat, but the use for such purposes is uneconomical.

Six earloads of grade Holstein cows and heifers were recently shipped from Northfield, Mass., to points in Illinois, Wisconsin and North Dakota. The shipment was worth over \$7,000, which shows there is profit in raising grade cattle.

After the grain is cut stock may be turned in on the fields to excellent advantage.

As a ready money maker there is nothing on the farm that pays better than the dairy.

Statisticians figure the value of manure products from a single cow at from \$35 to \$40 a year.

Mango pepper is being extensively raised in the Humboldt, Tenn., fruit belt. So far the returns have been extremely satisfactory.

Clean the weeds out of fence corners and everywhere else. Kill them before they go to seed. If you wait until frost comes it will be too late and a pollution will result.

INTERESTING EXPERIMENTS.

The Cornell poultry station reports some interesting results in the treatment of early-hatched pullets to secure best results from them as winter layers. Though the results of a single experiment are of course not to be accepted as final they are given for what they are worth, and only summarized here. Four methods of feeding were followed in the year's work, with 80 White Leghorn pullets hatched February 27—feeding to force and to retard early laying; feeding by hand and in hoppers. As to the first two methods we quote the Bulletin 249, Cornell Experiment station:

It has been thought that these earliest pullets should receive special treatment designed to check the laying tendency during late summer, with the hope of getting larger egg yield in early winter. This treatment is called retarding. The pullets, just approaching maturity, are allowed a grass run, and a satisfying ration of whole grain with a limited proportion of beef scrap, but no ground grain.

It is thought by many that if these pullets should be forced i. e., fed a rich, stimulating mash to induce egg production, they will lay a few small eggs and molt prematurely, thus greatly reducing their vitality; that in this case it would be a long time before they would resume egg production, their bodies would be permanently stunted, and their eggs would continue smaller than is natural to their variety.

The other methods need no definition.

The results were summarized as below.

1. Forced pullets made a better profit than retarded pullets.
2. Forced pullets ate less food per hen at less cost per hen than retarded pullets.
3. Forced pullets produced more eggs of a larger size, at less cost per dozen than retarded pullets.
4. Forced pullets produced more eggs during early winter than retarded pullets.
5. Forced pullets gave better hatching results of eggs than retarded pullets.
6. Forced pullets made a greater percentage of gain in weight than retarded pullets.
7. Forced pullets showed less broodiness than retarded pullets.
8. Forced pullets had less mortality than retarded pullets.
9. Forced pullets showed better vigor than retarded pullets.
10. Forced pullets showed the first mature molt earlier than retarded pullets.
11. Retarded pullets gave better fertility of eggs than forced pullets.
12. Hopper-fed dry mash gave better results in gain of weight, production of eggs, gain in weight of eggs, hatching power of eggs, days lost in molting, mortality, health and profit per hen, than wet mash.
13. Wet mash and grain-fed pullets consumed slightly less food at less cost, and produced eggs at slightly less cost per dozen than dry mash and grain fed pullets.
14. Wet mash and grain-fed pullets produced slightly larger eggs of slightly better fertility, and showed less broodiness than dry mash and grain-fed pullets.

15. Dry mash and grain fed pullets laid eggs of good size at an earlier period than wet mash and grain-fed pullets.

16. Hopper-fed pullets ate more than hand-fed pullets.

17. Pullets having more grain ate more grit and shell than those having a proportion of ground grain.

18. Pullets fed on grain were more inclined to develop bad habits than those having a mash.

19. Earliest producers did not give as many eggs in early winter.

20. Early layers gained as rapidly in weight as those beginning later to lay.

21. Prolificacy made but slight difference in weight of hen and weight of egg.

22. The most prolific pullets did not always lay earliest.

St. Louis Wool Market.

The local market is running along in about the same manner as last week, with a very moderate business being done, owing to the comparatively small supply of fleece wools on hand and to the absence of suitable offerings of territory stock. Remaining bright wools are being steadily maintained in value and the few transactions now passing are being put through at full prices. The marked activity in these wools has delayed the sorting and grading of new territory fleeces. However, dealers are now ready to show territory stocks, and it is expected that offerings will be fairly substantial after Labor Day.

A Bird's Eye View



of a city doesn't do justice to it, because it only gives an idea.

The same applies to this advertisement; it only gives a small idea of the Tubular qualities.

We want you to have a thorough understanding of the benefits derived from a Tubular Separator.

The simplicity, durability and efficiency of the Tubular are admitted by our competitors and vouched for by thousands of satisfied users.

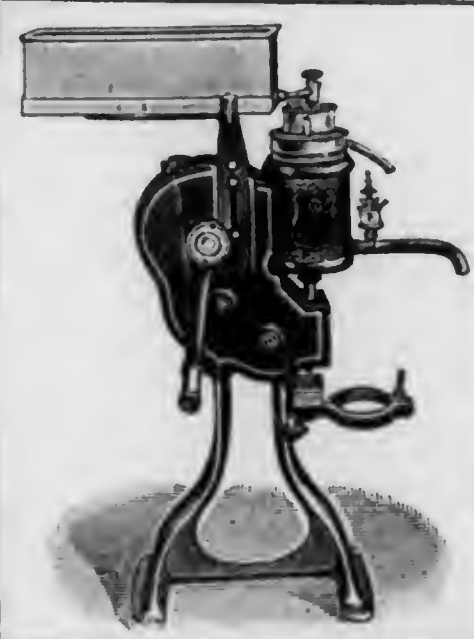
It is built to skim clean and last a life time; and it does and will.

The Tubular bowl is so simple and so easy to handle that it can be cleaned in two or three minutes.

There are so many points of excellence to be found in the Tubular, that to get a thorough knowledge of them you must read Catalog 300.

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**STILL BETTER
IN 1908**
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Cream Separators.**



The United States has always, since its introduction, separated more cream from the milk, and has done it more thoroughly and quickly than any other separator. The figures of the public national and international tests demonstrate this.

THE 1908 MODELS HAVE IMPROVEMENTS

which make the handling of milk still easier, quicker and more profitable. They do their work more efficiently, more economically than any other, and are built to wear. In spite of the fact that the demand is greater than ever before, and that dairymen everywhere are exchanging other makes for the reliable and efficient United States, the standard separator, we are prepared to make prompt deliveries anywhere.

Write to-day for "Catalogue No. 199" and any desired particulars
VERMONT FARM MACHINE CO., Bellows Falls, Vt.
Distributing warehouses at: Chicago, Ill., La Crosse, Wis., Minneapolis, Minn., Kansas City, Mo., Omaha, Neb., Toledo, O., Salt Lake City, Utah, Denver, Colo., San Francisco, Cal., Spokane, Wash., Portland, Ore., Buffalo, N. Y., Auburn, Me., Montreal and Sherbrooke, Quebec, Winnipeg, Man., Hamilton, Ont., Calgary, Alta.

STEAM HEATED PEN FOR STATE'S SWINE.

Of the many measures that were acted upon by the last Legislature there was probably none that caused more comment and even ridicule in this section of Pennsylvania, especially among the farmers, than that section of the appropriation for the Danville Hospital for the Insane which set aside \$6000 of the State's money for a building "suitable for raising hogs with sanitary apparatus and equipment." It has been a matter of general conjecture just what plans the legislators had in view for making hogs cleanly and bringing about conditions that would make this piggery a pleasant and attractive place, not inconsistent with the expenditure of \$6000.

Incidentally, it should be mentioned that on the farm at the hospital for the insane are maintained annually over 200 pigs. Whether the hogs at the hospital are of any especial breed with natures more sensitive and habits more refined than common hogs is not known. Suffice it to say that their lines have fallen in pleasant places.

The \$6000 piggery will first of all be warmed with steam heat, which is a luxury that even a hog should appreciate. Moreover, the hospital hog will not partake of common swill, but will feast on "cooked food," which implies that as a feature of the "sanitary apparatus and equipment" the piggery will have a cuisine, if not a specially trained chef.

But the means that are being taken for the comfort of the asylum pigs do not stop at steam heat and cooked food. Electricity is to dispel the darkness in the new piggery. Nor will the hogs be allowed to wallow in the mire in the manner so pleasing to hogs generally, for the very good reason that there will be no mire. The hogs will be very well trained.

THE BANG SYSTEM.

I don't think the Bang system carried out as it was first proposed would be practical, but carried out as Commissioner Pearson, of New York, is proposing, I consider it perfectly feasible. Whenever a farmer thinks he has a diseased animal in his herd, he notifies the department and a veterinarian is sent, who examines the animal or the whole herd, by physical examination, and in case he finds animals that manifest by physical examination, symptoms of tuberculous disease, he then tests them with tuberculin by and with the consent of the owner. Whereas, if they react the owner can take his choice of having them slaughtered, or if valuable, keep them to raise stock from and raise them, they being kept from other animals, and their milk sterilized and used to feed animals on.

A whole lot of the extreme ethical class have been howling that tuberculin was harmless, while thousands who have had experience with it are now testifying to the damage its indiscriminate use has done them. Some scientists have argued: Get rid of tuberculosis by tuberculinizing all cattle on the farms and slaughtering all that respond, and thus wipe it out. Thus, they say, you will not have it again, only as one buys it. Now I



EVERYBODY BUYING DE LAVAL CREAM SEPARATORS

The wonderful improvements made in the 1908 DE LAVAL CREAM SEPARATORS—added to their THIRTY YEARS record of ONE MILLION prosperous users throughout the world—have convinced practically all WELL-INFORMED buyers of their overwhelming superiority, as well as actual cheapness, and they are being bought in even greater proportions this fall than in the spring or ever before.

A catalogue to be had for the asking shows the reasons WHY.

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am going to say "rot." I have personally traveled in many states and thousands of miles, and been on hundreds of farms, and I am ready to go on record as saying, I have found more tuberculosis on the farms where this close communion has been practiced than on others. Thus, I say, a modified Bang system with sensible men behind it, is the most practical method that has as yet been advised. But that is not radical enough for the ethical class of M. D. V's. They will kick, of course.—Dr. C. D. Smead, in Maine Farmer.

TURKEYS FOR MARKET.

The season for turkeys is not far distant. The tall, lanky gobbler with no flesh on his thin frame, is not what they want in the markets. It is seldom possible to get rid of him at any price. Well-fattened, female birds are wanted, and if the gobbler would compete with these, he must be well developed, indeed. There is much to look after in handling turkeys for market, as many otherwise good fowls are practically spoiled in dressing and shipping. In the first place, turkeys should be fat, and it will require not less than thirty days to put them in that condition. During the time of fattening turkeys must not be con-

finer, but should be allowed their liberty in the fields. They should be fed morning and night all they will eat, and be careful that they have fresh water and grit. Whole corn, with an occasional mixture of other grain, will produce the best results. Do not wait until the last week and then try to rush them. It takes time to round out their bodies and give them a plump, full breast.—Journal.

CEMENT FOR WELLS.

Unsanitary dairy wells are a menace to health, and as the country becomes more closely settled, more and more care is necessary to provide good water. The director of the Chicago hygienic laboratory reports that of 153 wells on nearby dairy farms, examined by inspectors, only eleven were found to be safe for domestic purposes. In all cases the safe wells were those lined with cement, with cement covers, and a protecting flange of cement several feet out from the well. In some of the wells used for washing milk utensils, a high percentage of colon bacteria were found, and in some cases manure could be detected microscopically and by the odor.

Things to Think About.

Articles Discussed Under This Head
Open to Any of Our Readers.

MIXED BREEDING.

In mixed breeding, or cross breeding, nothing is accomplished beyond the first cross. While a few good individuals may be secured, the tendency is for the progeny to be below rather than above the average. A man conducting his breeding in a haphazard way is contending with fearful odds grouping in the dark following a will-o'-the-wisp. In a hundred years he would be just where he started. Incidentally this is just what we have been doing in this country from the beginning, and the reason why we have so few pure breeds of live stock and are, after all this time, sending our good money across the water for pure bred sires which we should produce at home.

After animals have been graded up to a practically purity of blood, the longer they are bred along this line the more prepotent they become, and the more certain that the offspring will uniformly possess general excellence of form, quality, action and utility.

The same is, of course, true of all live stock. The only certain method of raising the average standard of excellence is by persistent breeding to sires of the same breed until the native blood is obliterated and the progeny uniformly possess all those desirable qualities of the pure breed employed.—George H. Glover, D. V. M., Colorado Agricultural College.

The Australian Stud Book is published by the Government and no fraudulent pedigrees are recorded, as, like tampering with the mails or counterfeit money, it means the penalty for life. Entries to the Stud Book are free. The blanks and particulars may be had from the Compiler of Australian Stud Book, Melbourne, Australia, says the Sydney Stock and Station Journal. The same condition should exist in the United States. In Canada all records are kept by Government officials.

Connecticut Agricultural College is to set a good example to those who conduct egg laying contests. The object of this contest is to see which hen will lay the greatest number of eggs at the lowest cost, instead of at any cost as has been the case with most such contests. The contest will begin next October and last for one year.

The demand for the finest beef animals that can be produced is now so great and prices so high that it justifies farmers in breeding pure bred cattle of the beef breeds to get the full benefit of the best breeding as shown in the pedigree of the sires and dams. Pure bred stock is demonstrated at the Stock Show to be as much superior to the grades as the grades are better than the scrubs. The improved breeds of stock double the value in the early maturity, size and quality.—Live Stock.

The price of corn fed cattle is all that feeders could ask, \$8 having been paid for extra cattle in several instances. Even with corn at 65 cents, there is good money in turning it into beef at anything like these figures. And the hog market gives better promise, too. Four years out of five the live stock business pays well, and no man is shrewd enough to know when that fifth year is coming, so all there is to do is to stay with the business all the time. The man who is always jumping out and in, trying to hit the high places, is the one who always gets left. He never has any cattle to sell when they bring \$7 or any hogs when they sell at \$6.50.—Farm Magazine.

The United States Consul at Cologne reports that no timothy is raised in Germany and not much of any distinctive grass for hay, "the fields seemingly producing a mixture of varieties much resembling the natural growth on an Illinois prairie." The grass, when cut, yields exceedingly well, the lower growth being very heavy, owing to the fact that generally the meadows are irrigated. Harvesting is done mostly by hand. Two crops are always taken from the meadows annually and sometimes three.

The Mississippi Experiment Station has just issued a bulletin describing experiments made for the purpose of determining the relative advantages of rations with and without silage for dairy cows. It was found that the dry ration cost about 60 cents per cow per month above the cost of the ration using silage. Silage reduced the cost of producing a gallon of milk 39.03 per cent. The cost of producing a pound of butter-fat was reduced 29.0 per cent. It was shown that the use of silage during the months of November, December and January increases the profits on a

herd of 2 cows by \$221.22 over the dry feed results.

On the Gilbert Farm Department of Connecticut Agricultural College at Georgetown, Conn., there are now 38 cows, one Jersey bull, 20 head of young stock, one pair of horses and one pair of mules, and 25 head of sheep. The cows have been selected along dairy lines and if by the record kept of the production of each cow does not show a profit, the animal is disposed of for beef. By this process of elimination a herd of excellent stock is being built up. More than 200 quarts of milk a day is being produced. Eighty-five quarts are bottled and sold at retail in the village of Georgetown at eight cents a quart, and the rest is shipped in cans to Stamford, where it is sold as certified milk for twelve cents a quart. The farm gets six cents a quart delivered at Georgetown station. A. B. Clark, a graduate of the college, is superintendent of the farm.

According to Coburn of Kansas, where alfalfa grows the land is not only enriched, but the grower as well, for it not only fills the soil with valuable plant-food, but as hay and pasture it brings large returns that substantially increase the owner's bank account. Through its wonderful root-system alfalfa restores, enriches and improves rather than depletes the soil, to the great benefit of other succeeding crops.

Alfalfa makes poor land good, and good land better.

CATARRH Instant Relief and positive cure. Trial treatment mailed free. Toxic Laboratory, 1123 Broadway, New York.



SICK HOGS Cured and disease prevented with Snoddy's Powder. Clears hogs of worms. Will send man, treat sick hogs, and guarantee a cure. Treatment is simple; anyone can use it. Used and endorsed by leading breeders everywhere. Makes hogs thrifty in a few days. 25¢ case cures 40 hogs. Write for book on hogs, also reports of public tests, sent free. Agents wanted. DR. D. C. SNODDY CO., Nashville, Tenn.

It is not too early to begin looking out for fall feeders. Cattle feeding should prove profitable next year.

At a sale of Poland China swine a few weeks since in Illinois, of 59 head, one-third of them being fall pigs, brought an average of \$60. Additional evidence of the value of pure bred stock.

At a recent sale of Shorthorn cattle near Marshall, Michigan, at which 68 head brought \$15,510, an average of \$228 per head. These sales and prices point strongly to the fact that men know what they are doing when they pay good prices for breeding animals. A Wisconsin breeder recently sold 45 head of pure bred Shorthorns for \$20,000, which shows the value placed upon pure bred stock.

The Overton Hall Jersey cattle sale at Nassau, Tenn., May 14th, resulted in the selling of 80 head at an average price of \$430, or a grand total of \$35,000. A strong argument in favor of pure breeds.

F. S. Peer, who has recently returned from a trip to Europe for the purchase of stock, secured on his trip 46 Jerseys, 4 Guernseys, 14 Scotch Highland sheep, and 1 horse. He brought the stock in by way of Quebec.

The handsome silver trophy cup offered by the American Holstein-Friesian Association for the best judges of Holstein cattle at the recent National Dairy Show at Chicago, and won by the Missouri team, coached by Professor C. H. Eckles, has just been received and is on exhibition at the Dairy building. The team winning this trophy was composed of the following: O. E. Reed, Moberly; Norton H. Shepard, Columbia; C. K. Snellings, Columbia; R. H. Mason, Mexico, and H. E. McNatt, Aurora, all students from Missouri Agricultural College.

The Jersey cow is a highly developed milk-making machine. She has been bred so long for this purpose that her characteristics have become fixed, and the descendants of a well-bred cow dairy can be depended upon. The amount of milk that she will make depends largely on the amount of food that you can get her to use.

In composition, alfalfa is nearly, if not quite, equal to bran pound for pound. The excellent feeding value of alfalfa lies in its high content of

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A MANURE spreader is one of the best investments you can make. Don't delay.

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The agent will be able to explain to you the strong features of the I. H. C. spreader he handles.

"Kemp 20th Century"—Return Apron Spreader
"Cloverleaf"—Endless Apron Spreader
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These machines are all made simple and strong, so that they give the least possible trouble in operation. They are easy to operate and they handle manure perfectly in all conditions.

They are built to give many years' service. The materials and workmanship are of the best. With any one of the I. H. C. spreaders you will not be laying it up in the shed or driving it off to the shop for repairs every little while.

It pays every farmer to own a manure spreader. It pays to buy the best spreader.

You know the International local agent, handling any of these lines. He will not misrepresent things to you. Go to him for a manure spreader catalog or, if you prefer, write direct to

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digestible protein. With an average yield of four tons, alfalfa will produce 880 pounds of digestible protein per acre. If this amount of protein is supplied from oil meal, which is usually purchased for its protein contents, it would require 1.5 tons, which would cost at present \$52.50.

There are times when it is not best to stock up with an expensive purebred herd, but in the majority of cases it is unwise for a farmer or dairyman to continue the use of grades when there is more money in a purebred for whatever purpose he may want.—Holstein Register.

Post Augers For Farmers and Fence Builders



Augers and Bits of all Kinds

Send for prices direct to the manufacturer.

T. SLACK & SON, Oxford, Pa.

FEDERAL APPROPRIATIONS FOR ROAD IMPROVEMENT.

As Master of the National Grange, I am pleased to have this opportunity for presenting some considerations of this important question from the farmer's standpoint. The farmers have a common interest with all other advocates of road improvement, and although there may be differences of opinion as to methods, we are all working for the same ultimate purpose—the establishment of a complete system of properly constructed roads in all sections of the country. How such a road system can be secured is a problem that more directly concerns the farmers than any other class, and it may be safely said that the question of better roads is essentially a farmer's question.

It is true that all industrial interests are affected by the nature and condition of the roads over which the products of our farms are transported to market, but it is the farmers who suffer most from the inferior road system of the United States. And I am confident that it is to the farmers that we must look as the active force and influence that will secure the enactment of the legislation needed to bring about that improvement in road conditions that we all desire.

And here I wish to refer briefly to the seeming conflict of interests between the farmers and the owners of motor vehicles which has in some districts given rise to pronounced antagonism and hostile legislation. That since the introduction and general use of the automobile there have been many instances of gross disregard by the drivers of motor vehicles of the public's right to the use of our highways cannot be denied. The coming of the automobile has brought with it the victims of speed mania, who in their mad desire to beat records drive their high-powered machines along country roads at a speed dangerous to all others using these roads. It is only natural that the farmers, on whom in most sections of the country the chief burden of constructing and maintaining public roads has fallen, should resent the violation of their right to use these roads in safety, and should have sought to have severe penalties imposed on the offending parties. For myself I may say that I believe that the attitude of the farmers toward the automobile was to a large extent justified by the outrageous conduct of the drivers of these vehicles. It is doubtless true, as is often asserted, that the "speed maniacs" constitute a very small percentage of the total number of automobile users. I am pleased to know that the abuses complained of in the earlier years of the automobile have to a large extent disappeared, and trust that through the influence of the automobile clubs and associations there may be brought about a willingness to respect the rights of all the people to the use of the highways, that will give no occasion for hostility toward the orderly, reasonable use of the automobile.

I realize that the motor vehicle is here to stay, and that it is a factor that must be taken into consideration in discussing the improvement of our roads. The question as to how far it creates new problems of road maintenance and repair I must leave to the expert road makers, and would only suggest that it is important that all the facts relating to the effects of automobile traffic on improved roads should be ascertained before raising needless alarm over the alleged destructive tendencies of the inflated rubber tire.

One phase of the development of the motor vehicle that is of special interest to the farmers, is the possibilities of the commercial truck, or power-operated farm wagon. It would seem that here is a very large field for an industry that will be profitable to both the farmers and the manufacturers of such vehicles. With improved roads the use of motor trucks for the conveyance of farm products to market should become general in all sections of the country, thus enabling the farmer to market his crops more quickly and at less expense. I believe that no injury is caused to macadam roads by these commercial vehicles, but on the contrary their solid rubber tires operate practically as rollers and serve to keep such roads in good condition.

In this connection I wish to emphasize the fact that the road question in the United States is not only a farmer's question, but first of all, a question of the commercial use of the highways. To the farmer the roads are the means of transporting his product to market, and it is from this point of view that the farmers will insist that all plans for road improvement must be considered. Over our country roads there are annually hauled nearly 200,000,000 tons of staple farm products, and if to this we add the smaller products such as fruit, milk, eggs, etc., and the fertilizers, feed, coal, lumber, etc., taken from the town to the farm we will have an aggregate of at least 250,000,000 tons carried for long or short distances over our highways. These figures show the enormous importance to the farmers of a system of improved roads that would enable them to reduce the cost of hauling this volume of freight from one-half to two-thirds of what it now costs them. It is estimated by competent authorities that over the ordinary country road the farmer draws an average of 2,000 pounds an average distance of 12 miles at a cost of \$3.00, and it has been shown that with improved roads the cost of moving the same load that distance would be little more than \$1.00. Making allowance for exceptional cases it is certain that the cost of transporting a ton of farm products over improved roads is not one-half of the cost over earth roads. Under a general system of improved roads the cost of hauling these 250,000,000 tons would be cut in two, thus effecting a direct saving to the farmers of the country of at least \$125,000,000 annually.

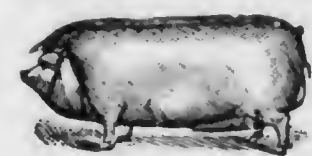
Nor is this the only saving to the farmers that would be effected through improved roads. Because of bad roads the farmers or their hired men must now spend twice as much time on the road as would be required under a proper system. In bad weather the roads are often impassable, so that time must be taken from farm work in fine weather to get the crops to market. With a system of good roads over which farm products could be hauled in one-half of the time now

necessary, the farmers would have just so much additional time for other work, and could therefore greatly increase the productivity of their farms.

It is needless that I should occupy your time with any extended statement of the benefit of good roads. The direct saving in dollars and cents is only one of the many advantages to the farmers that would result from improved roads. There can be no question that the deplorable condition of our roads is to a large extent responsible for the dissatisfaction with country life, which drives so many of our people into the towns and cities. Bad roads make farming unprofitable and undesirable. They increase the solitude of life on the farm by making more difficult and less frequent visits to the neighbors, and to the villages and towns. They limit opportunity by forcing the farmer to spend twice as much time in going to and from his markets as he would with a good road system. In short, the greatest drawback to farm life today is the condition of the average

FARMERS

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ENON HERD CHESTER WHITES

Have some extra choice Fall pigs, both sexes. If you are looking for good ones write me.

D. W. SHELLABARGER, Enon, Ohio



Chester Whites

I have them combining the best blood in Chester County. If you want the good old Chester that has made this county famous, we have them here that will please you. We breed and sell only the best. Write me.

L. WEBSTER, Kelton, Pa.



GREENWOOD STOCK FARMS

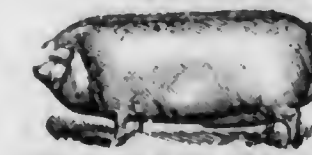
Farmers and Breeders I now have a large stock, probably the best I ever owned, thoroughbred Poland Chinas and Chester White Pigs, 2 to 6 mos. old, sows bred, ready for service, all from prize winning stock. Guernsey and Jersey Cattle, Buff and Barred Plymouth R. Chickens.

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Route No. 1, Rohrsburg, Pa.

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THE SNODDY REMEDY CO., Box 290, ALTON, ILL.

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Nor is it necessary to dwell upon the inferior character of our existing roads. The fact that out of a total road mileage in the United States of 2,151,570, only a fraction over 7 per cent. can be called improved, speaks for itself.

The facts as to present conditions have long been known to the thoughtful farmers of the country, and they have been the first to realize the urgent need for radical reforms in methods of road construction and improvement. It is true that the farmer is naturally conservative, and perhaps has not taken up the subject of better roads as quickly as the residents of towns and cities would act in a matter vitally affecting their interests, but from my wide acquaintance with the farmers of all sections of the country I am prepared to affirm that they are as a whole awake to the importance of this subject, and ready to do all in their power to further the work of road improvement.

The farmers recognize the need for better roads, and realize how largely such roads would contribute to their comfort and prosperity. They are anxious that well-considered plans for road improvement should be submitted to the state and national legislatures, and will do all in their power to aid in securing the adoption of such plans.

It may be asked why, if the farmers favor good roads, the work of road improvement has not made greater progress. The chief reason is to be found in the lack of money required for the construction and maintenance of improved roads. Many farming sections of the country are still sparsely populated, and the economic conditions of the farmers in general is such that they regard it as impossible for them to contribute in taxes and funds

necessary for the construction of a permanent road system. While it is true that it would pay even the poorest communities to increase their expenditures for road improvement, it may be said that as a general proposition the means of the farming districts are wholly inadequate to provide for a proper road system.

In view of these conditions the farmers have in recent years come to realize that the road problem is not merely a question for the communities through which the road runs, but one that concerns the people of the states and of the whole nation. They are convinced that as the workers of the towns and cities, the manufacturers, merchants, and indeed all classes and interests, are affected by present road conditions, the people of the entire country should aid in establishing a better system. Believing that appropriations for this purpose should be made from other sources than local taxation they have aided the movement for State aid for highway improvement which has been in progress for some years past, and their votes have aided in securing action on this matter in various States.

In many States, however, the same conditions which prevent the construction of the needed mileage of improved roads make it impracticable to secure the desired appropriation by the State. The necessity for better roads is admitted, but it is not believed that the States are justified in increasing their tax rate to the extent needed for this purpose.

The general recognition of these conditions has in recent years given rise to a growing demand for National aid for road improvement. It is urged by the farmers that they do not receive a fair share of the benefits of the money raised by taxes upon the people of the whole country, and that the improvement of the public highways is as equally deserving of Federal assistance as is the improvement of our waterways, for which large amounts are annually appropriated by Congress.

The expenditures for river and harbor improvement are justified on the ground of their importance to the trade and commerce of the country as a whole. The advocates of National aid for better roads believe that the improvement of the public high-

way is of even greater importance to the people of the entire country, since this is a matter that affects every industrial interest, and will benefit the trade and commerce of every section of the United States.

I have recently had brought to my attention in a striking form the facts as to the relatively small proportion of the nation's revenue that is devoted to purposes affecting the great agricultural interests of the country. Statistics of the exports from the United States for the ten years ending with 1906, show that nearly 60 per cent. (59.13, to be exact) of the exports during that period were the products of our farms, the total value of these products amounting to more than eight billions of dollars. Yet, for the benefit of the industry producing these enormous values, there was expended during the same period less than one per cent. of the total Federal expenditures, met chiefly by indirect taxes paid largely by the farmers of the entire country. During that period Congress appropriated \$180,537,000 for the improvement of our waterways and harbors, but not one dollar (unless the few thousands annually appropriated for the Office of Public Roads, U. S. Department of Agriculture, are so regarded) for the improvement of our highways.

The farmers are determined that this state of affairs shall not continue. They have made up their minds that Congress must devote a share of the annual appropriations to the construction and maintenance of our roads. They are not committed to any special policy as to how these appropriations shall be expended, so long as care is taken that the money is wisely devoted to the purpose for which it is intended. Some of us believe

Continued to page 24



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of trains, trolleys or automobiles if driven with a "Beery Bit," the only absolutely safe and humane bit made. "Four Bits in One." Quickly adjusted to suit any month. Write me today for trial offer and much valuable information.

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FEDERAL APPROPRIATIONS FOR ROAD IMPROVEMENT.

As Master of the National Grange, I am pleased to have this opportunity for presenting some considerations of this important question from the farmer's standpoint. The farmers have a common interest with all other advocates of road improvement, and although there may be differences of opinion as to methods, we are all working for the same ultimate purpose—the establishment of a complete system of properly constructed roads in all sections of the country. How such a road system can be secured is a problem that more directly concerns the farmers than any other class, and it may be safely said that the question of better roads is essentially a farmer's question.

It is true that all industrial interests are affected by the nature and condition of the roads over which the products of our farms are transported to market, but it is the farmers who suffer most from the inferior road system of the United States. And I am confident that it is to the farmers that we must look as the active force and influence that will secure the enactment of the legislation needed to bring about that improvement in road conditions that we all desire.

And here I wish to refer briefly to the seeming conflict of interests between the farmers and the owners of motor vehicles which has in some districts given rise to pronounced antagonism and hostile legislation. That since the introduction and general use of the automobile there have been many instances of gross disregard by the drivers of motor vehicles of the public's right to the use of our highways cannot be denied. The coming of the automobile has brought with it the victims of speed mania, who in their mad desire to beat records drive their high-powered machines along country roads at a speed dangerous to all others using these roads. It is only natural that the farmers, on whom in most sections of the country the chief burden of constructing and maintaining public roads has fallen, should resent the violation of their right to use these roads in safety, and should have sought to have severe penalties imposed on the offending parties. For myself I may say that I believe that the attitude of the farmers toward the automobile was to a large extent justified by the outrageous conduct of the drivers of these vehicles. It is doubtless true, as is often asserted, that the "speed maniacs" constitute a very small percentage of the total number of automobile users. I am pleased to know that the abuses complained of in the earlier years of the automobile have to a large extent disappeared, and trust that through the influence of the automobile clubs and associations there may be brought about a willingness to respect the rights of all the people, to the use of the highways, that will give no occasion for hostility toward the orderly, reasonable use of the automobile.

I realize that the motor vehicle is here to stay, and that it is a factor that must be taken into consideration in discussing the improvement of our roads. The question as to how far it creates new problems of road maintenance and repair I must leave to the expert road makers, and would only suggest that it is important that all the facts relating to the effects of automobile traffic on improved roads should be ascertained before raising needless alarm over the alleged destructive tendencies of the inflated rubber tire.

One phase of the development of the motor vehicle that is of special interest to the farmers, is the possibilities of the commercial truck, or power-operated farm wagon. It would seem that here is a very large field for an industry that will be profitable to both the farmers and the manufacturers of such vehicles. With improved roads the use of motor trucks for the conveyance of farm products to market should become general in all sections of the country, thus enabling the farmer to market his crops more quickly and at less expense. I believe that no injury is caused to macadam roads by these commercial vehicles, but on the contrary their solid rubber tires operate practically as rollers and serve to keep such roads in good condition.

In this connection I wish to emphasize the fact that the road question in the United States is not only a farmer's question, but first of all, a question of the commercial use of the highways. To the farmer the roads are the means of transporting his product to market, and it is from this point of view that the farmers will insist that all plans for road improvement must be considered. Over our country roads there are annually hauled nearly 200,000,000 tons of staple farm products, and if to this we add the smaller products such as fruit, milk, eggs, etc., and the fertilizers, feed, coal, lumber, etc., taken from the town to the farm we will have an aggregate of at least 250,000,000 tons carried for long or short distances over our highways. These figures show the enormous importance to the farmers of a system of improved roads that would enable them to reduce the cost of hauling this volume of freight from one-half to two-thirds of what it now costs them. It is estimated by competent authorities that over the ordinary country road the farmer draws an average of 2,000 pounds an average distance of 12 miles at a cost of \$3.00, and it has been shown that with improved roads the cost of moving the same load that distance would be little more than \$1.00. Making allowance for exceptional cases it is certain that the cost of transporting a ton of farm products over improved roads is not one-half of the cost over earth roads. Under a general system of improved roads the cost of hauling these 250,000,000 tons would be cut in two, thus effecting a direct saving to the farmers of the country of at least \$125,000,000 annually.

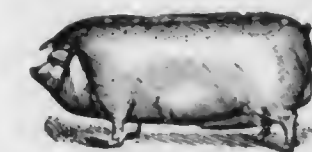
Nor is this the only saving to the farmers that would be effected through improved roads. Because of bad roads the farmers or their hired men must now spend twice as much time on the road as would be required under a proper system. In bad weather the roads are often impassable, so that time must be taken from farm work in fine weather to get the crops to market. With a system of good roads over which farm products could be hauled in one-half of the time now

necessary, the farmers would have just so much additional time for other work, and could therefore greatly increase the productivity of their farms.

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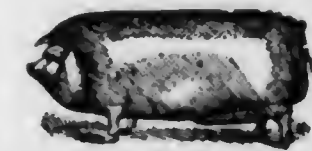
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Continued to page 24



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NEWTON'S Horse, Cough, Dis-temper and Indigestion Cure
A veterinary remedy for wind, throat and stomach troubles. Strongly recommended. \$1.00 per box of 12 doses, or 50c. 5 paid. The Newton Remedy Co., Toledo, Ohio.



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of trains, trolleys or automobiles if driven with a "Beery Bit," the only absolutely safe and humane bit made. "Four Bits in One." Quickly adjusted to suit any mouth. Write me today for trial offer and much valuable information.
Prof. D. B. Beery, Pleasant Hill, Ohio

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Lever and Asparagus plants, shrubbery, ornamentals 1¢ millions at Wholesale Prices. Quality unsurpassed. Healthful, taste to grow, well-rooted. Every place guaranteed. Get our free illustrated price list before you buy and compare our low prices with others'. Write today.
The Westminster Nursery, Box 10, Westminster, Md.



Chicago, Union Stock Yards, August 31.—Top prices in the cattle and hog trade are very deceptive these days, and are really no criterion of the general market from day to day. This is better understood when it is known that a very meager proportion of the beef steers in late weeks have gone above \$6.00, while the great bulk of the trading has been on a \$5.15@ \$6.75 basis, with a good deal of trading under \$5.25 and down to \$4.50. This goes to show how scarce long-fed corn cattle are, and the big number of medium corn-fed and grassy cattle that are being sent marketward. This condition is just as pronounced in the swine department. Sales of hogs above \$6.80 in late weeks cut little figure in the trade, as most of the business was transacted at \$5.50@ \$6.75, with thousands of grassy underweights and pigs going under \$5.00 and down to \$3.50 late in August.

Prospects for Corn-Fed Cattle.

Good to prime corn-fed cattle have struck a new gait, and prospects are bright for a good, healthy tone to trade in the future. Prices late in August averaged 40¢ to 60¢ higher than two weeks previous to that time, and though there may be some temporary dips downward of the price range, they will seek still higher levels. Buyers are beginning to display real concern about the future supplies of finished corn-fed cattle. And they have good reason to, as the number of these to come forward during the fall and early winter months will likely be the smallest in years. The outlook for plain and half-fat grades is less rosy, and there seems to be goodly numbers of these back in the country. Besides, big runs of western rangers will be available during September and most of October. After these are cut out of the way then the plainer classes of natives will be given a clearer field in market circles.

Receipts of Hogs Dwindling.

It is not possible to detect a weakening of the hog producers' determination to withstand the pounding prices of the packers. If buyers want supplies increased they have to bid prices up sharply, while it takes only a few days of slashing the rates to cut receipts down to light proportions. The fact of the matter is, the run of hogs during the next two months does not look at all big. The decrease commenced in June, and the August receipts fell under one year

ago, while the falling off in September promises to be even more pronounced. While supplies at the six principal markets for the year to date show a gain of upwards of 1,000,000 on that of 1907, this surplus is being rapidly decreased. Along with the decrease of hogs on foot is a smaller average weight of the offerings at all points, which means a big shrinkage in pounds of pork products. If there is cause for taking a pessimistic view of the future hog market, we fail to comprehend same.

Thin, Grassy Hogs Not Wanted.

It is a wide jump in prices from thin, grassy to good, corn-fed lots, quality being the main factor with buyers now. Thinnish packing cows, underweight grassy hogs and light pigs are not wanted, as they are making a very poor showing in the carcass even when bought at relatively low figures. Where such stock are in healthy condition they should be kept back in the country, as free marketing of them acts as a dead weight on the trade, and assists buyers in making raids on the price range for good swine.

Unstable Market for Lambs.

The market for lambs has acquired the habit of backing up suddenly and sharply when the price goes much above the \$6.25 mark. In order to start goodly runs to market buyers have only to put the rates above that figure, but just as soon as they level them much under that price there is a contraction of the receipts of both western ranges and natives. This would go to show that producers are not inclined to feed a sinking market liberally, and buyers will likely find it a harder task to pound the price range at their will, the abundance of feed in the west and the good pasturage in the more eastern states enabling owners to hold their offerings if prices are dropped too low.

August Run of Cattle Larger.

Marketing of cattle here during August was 237,000, being 8,000 larger than the corresponding month of last year, the increase being due to a larger movement of cattle from the western range than usual for this season of the year. Receipts of 470,000 hogs were 41,000 fewer than August, 1907, this decrease being a reflection of the decreased number of good swine in the country at this time. Arrivals of 352,000 sheep and lambs

showed a decrease of 8,000 from August of last year, with the great bulk of offerings from the western range.

Top Beeves make \$8.00.

Top cattle during August made \$8.00, Clay, Robinson & Co. selling Indiana-fed offerings at this figure in the week ending the 22nd, which compared with a top of \$8.15 during the last week in July. The great bulk of August went at \$5.15@ \$6.90 against \$5.60@ \$7.15 the last week in July, with the great bulk of the business during August being done at \$5.25@ \$7.00.

Hogs Reach \$7.10.

Prices for hogs at the close of August were elevated to the best basis of the year, tops reaching \$7.10 and selling in main at \$6.75@ \$7.00 for medium to choice corn-fed swine, although most of the common to good grassy lots sold at \$6.50 and down to \$5.75, with under weights as low as \$5.00 and light pigs down to \$4.50. The bulk of the swine during August went at \$6.00@ \$6.85.

Sheep Market Hit Hard.

It took a prime class of lambs to reach \$6.10 at the close of August, and bulk of trading was done at \$6.00 and down to \$5.25, while most mutton stock was secured at \$3.50@ \$4.25. The top for lambs during August was \$6.85, with bulk of trading at \$5.25@ \$6.50, while best sheep were secured at \$4.65 and most of the mutton classes at \$3.50@ \$4.50.

Let us have your advertisement.

FOR SALE

The Famous Mary L. Poultry Plant

is offered for sale at a very great bargain. Over \$75,000 have been expended in land, buildings and equipment that you can have for a very few thousands of dollars! And on easy terms. The Mary L. Poultry Plant is without doubt the largest and finest equipped institution of its kind in the world. Thousands of persons have paid 25 cents admission to inspect this property. A never satisfied market is ever ready for the products of the poultry yard.

There is a fortune in this property for the right man. Write today for illustrated descriptive circular and terms.

W. A. GRAHAM, Trustee,
Box 805, SIDNEY, OHIO.

TIMELY HINTS OF FARM AND GARDEN.

The cowpea is probably next to clover as a nitrogen gatherer.

The farmers of Lancaster County, Pa., are planting locust groves on their farms. One farmer has 8000 trees on thirty-five acres.

It is estimated that over 2,000,000 tons of commercial fertilizers were used in the United States last year, valued at more than \$10,000,000.

No manure will improve the soil faster than sheep manure, unless possibly that made by fowls, which is often known as American guano.

Sorghum contains about as much feeding value as timothy hay, according to analysis.

A heavy roller should be used before harrowing, when the ground is full of large clods.

Last year this country imported 1,000,000,000 pounds of nitrate of soda from Chile.

The Orchard.

Low, stout trees, are preferable to tall, slender ones.

Thirty low-headed apple trees are enough for an acre.

Crimson clover makes a good cover crop for orchards in latitudes where it will grow. Sow this month.

Fruit trees when crowded are good guaranties of reduced crops of undersized, inferior and badly colored fruit.

A handy pruning tool is a sharp chisel in the end of a stiff pole. Set against a limb and struck with a mallet a clean cut is made.

It is a mistake to fill the holes half full of manure when planting trees. Soil should be mellow for three feet all around, but not too wet.

Never fill an old orchard with young trees. The soil is often exhausted by the growth of the former occupants. It is the best to start a new one.

Many trees are lost in transplanting by neglecting the proper cutting back, thus leaving too much work for the crippled roots to accomplish.

Small Fruit Culture.

Do not allow water to stand about the grape vines.

Wood ashes will help to make the strawberries more firm, because they furnish potash.

Old bones pounded up and placed about the roots of young grape vines will help them.

It is best to keep up cultivation of the strawberry bed until October or November, but after August it is not advisable to cultivate any of the other small fruits.

Animal manure applied to grape vines induces a rank, coarse growth of wood and foliage, which is unfavorable to growth of fruit. It is far better to use potash fertilizers.

Current or gooseberry cuttings made this month and set out in moist, partially shaded ground, should readily root and form good plants by next spring.

The Vegetable Garden.

Plant the winter onions. Protect the cauliflower heads from the heat of the sun.

Do not allow the tomato vines to lie on the ground. Tie them to a stake.

When the cabbage heads show signs of bursting, the growth can be

checked a little by slightly pulling each head so as to break a few of the finer roots.

By at once gathering and burning all diseased onions, onion smut can be prevented.

The time to dig potatoes is when the vines and tubers have reached maturity.

The practical gardener does not look so much to fertility as he does to drainage, location and the possibilities of improvement.

The Dairy.

There is no danger of washing the separator too often.

There is no profit in the cow with the small udder and big appetite.

The flavor of good butter is frequently spoiled by too heavy salting.

Milk pails and cans should be used for no other purpose than to hold milk.

In order to get the best flavored milk the cow should be fed nothing until after milking.

Regularity in milking helps the flow during the present and all subsequent lactation periods.

Do not allow ensilage to stand in the stable, nor any hay to be fed just before milking, or a dust may be raised.

The silos should be far enough away from the stable to eliminate all danger of the milk absorbing the odor of the ensilage when it is thrown out of the silo.

The cows should be kept clean, and not allowed to wade in filth. This calls for clean yards and clean, well-bedded stalls.

The Work Horse.

Oil meal or ground flaxseed is a good remedy and preventative for constipation.

In training a colt teach him one thing at a time, and do that thoroughly.

When horses have free access to salt at all times, they are not so apt to suffer from worms.

If the horse's shoulders are clean the collar will not be much dirty.

Feeding a horse corn one day, oats the next, and something else the next, is a good way to quickly invite indigestion.

The Sheep Fold.

The breeding ewe should be kept thrifty and strong.

Sheep have excellent digestion and utilize food to the fullest extent.

Keep the wool as clean as possible and it will bring the best price.

Water aids in the digestion and assimilation of food, and there should be a constant supply in all pastures.

While breeding beef for mutton, do not place too much stress on fleece.

A field of rape is one of the best things to provide for a flock of sheep as lambs.

Wet backs and muddy feet are apt to mean a loss.

A little grain should be fed breeding ewes, but not enough to fatten them.

Never place more food before the sheep than what they will eat up readily.

The stables should be cleaned out at least once a month. If the manure is allowed to remain too long it begins to send off ammonia and other foul gases which are injurious to the stock.

To do well, sheep must have exer-

cise. It is important that they be kept strong on their legs.

The Porker.

Mud holes and wallows should not be allowed in the hog pasture.

Do not feed such vegetables as cabbage and turnips a few weeks before butchering time.

The yards should never be allowed to become foul and unsanitary. Plow them often.

Plank troughs will do if kept clean, but cast iron troughs are the most sanitary.

Stock raisers are called upon to do quite as much thinking as most any business man. A certain farmer planted a couple of acres of sweet corn at three different periods. He is now using the first planting, feeding the pigs and reports them growing fine and saving more than half his shorts through feeding the new corn, which they eat up clean, stalks and all.

This man is using good judgment by cutting down and saving half his shorts by using the cheap green feed and making a better gain and growth than when feeding all shorts. Milk and cornmeal are both good feeds, but when combined are better than either separate. This is the same principle on which to cheapen the feed by feeding sweet corn green, in conjunction with the shorts.—Journal of Agriculture.

FOR SALE OR EXCHANGE.

Only Two Cents a Word.

All classified. Each initial or number counted as one word. No advertisement taken for less than 25 cents each issue. All replies must be sent direct to advertisers. Cash covering the exact number of words at 2 cents each must be sent with every order. This Department for Live Stock Only.

CATTLE.

PURE-BRED Registered Holstein bull calf, Dam's record 15.34 lbs. MADISON COOPER, 101 Court, Watertown, N. Y.

JERSEYS—Combination and Golden Lad. For sale—10 cows, 10 heifers and 20 bulls. S. E. NIVIN, Landenberg, Pa.

PURE-BRED Holstein Bull Calf. Eligible for registration. Also high-grade bull calf. MADISON COOPER, 101 Court, Watertown, N. Y.

HOGS.

POLAND CHINAS of best strains at half price now. Large, long pigs, gilts, sows and boars. Satisfaction and safe arrival guaranteed. Write for circular and particulars. A. F. SIEFKER, Defiance, Mo.

FOR SALE—Some fine Yorkshire Pigs—no better stock in U. S. Just imported—new blood. A. A. BRADLEY, Frewsburg, N. Y.

Prices right; Hogs right—Large English Berkshire and Large Bone Poland-China Hogs—Anything from 8 weeks to teated sows and boars ready for service. Write your wants. GUS BRUNNER, - - - - - Snoman, Ind.

REGISTERED Pure-bred Swine, Bred Sows \$12. Stock of all ages for sale. WM. BARSHMAN, Thurmont, Md.

MISCELLANEOUS.

HORSES—Genuine Blood, Barry Co Iowa City, Ia., c. 11-11-11

FEDERAL APPROPRIATIONS
FOR ROAD IMPROVEMENT

Continued from page 21

that the creation of a National Highways Commission, with power to organize an efficient corps of trained road engineers, who, in co-operation with the State local highway authorities, would supervise the disbursement of the Federal grants would be a satisfactory solution of the problem. This is, however, a matter to be worked out by the Committees of the House and Senate which will pass on the legislation to establish the general policy of National aid, and I am confident that a plan will be devised that will be satisfactory to Congress, the State and local road officials, and the people of the country as a whole.

National aid will not, as some persons have suggested, lessen the interest of the States, Counties and Townships in road improvement. On the contrary, the roads constructed with Federal assistance will serve to stimulate everywhere the desire for better roads, and will be the means of ultimately giving the entire country an uniform system of scientifically constructed public highways.—Address by Hon. N. J. Bachelder, Master of the National Grange, at Good Roads Convention, Buffalo, N. Y., July 7 and 8, 1908.

UNITED STATES DEPARTMENT
OF AGRICULTURE'S CROP
REPORT.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture finds, from the reports of the correspondents and agents of the Bureau, as follows:

The condition of corn on September 1, was 79.4 per cent of a normal, as compared with 82.5 last month, 80.2 on September 1, 1907, 90.2 on September 1, 1906, and a ten-year average on September 1 of 81.0 per cent.

The average condition of Spring wheat when harvested was 77.6 per cent of a normal, as compared with 80.7 last month, 77.1 when harvested in 1907, 83.4 in 1906, and a ten-year average when harvested of 77.9.

Barley—The average condition of barley when harvested was 81.2, against 83.1 last month, 78.5 when harvested in 1907, 80.4 in 1906, and a ten-year average when harvested of 83.5.

The average condition of the oat crop when harvested was 69.7, against 76.8 last month, 63.5 when harvested in 1907, 81.0 in 1906, and a ten-year average when harvested of 80.7.

Buckwheat—The average condition of buckwheat on September 1 was 87.8, against 89.4 last month, 77.4 on September 1, 1907, 91.2 in 1906, and a ten-year average on September 1 of 86.3.

Potatoes—The average condition of potatoes on September 1 was 73.7, against 82.9 last month, 80.2 on September 1, 1907, 85.3 in 1906, and a ten-year average on September 1 of 80.8. The condition on September 1, in important potato States, was: Maine 86; New York 67; Michigan 72; Wisconsin 73.

Tobacco—The average condition of tobacco on September 1 was 84.3 against 85.8 last month, 82.5 on Sep-

tember 1, 1907, 86.2 in 1906, and a ten-year average on September 1 of 83.7. The condition on September 1, in important States, was: Kentucky 82; North Carolina 84; Virginia 90; Tennessee 90; Ohio 70; Wisconsin 83; Connecticut 99; Florida 94.

Flaxseed—The average condition of flaxseed on September 1 was 82.5, against 86.1 last month, 85.4 on September 1, 1907, 89.0 in 1906, and a five-year average on September 1 of 87.0.

Apples—The average condition of apples on September 1, was 52.3, against 52.2 last month, 34.7 on September 1, 1907, 70.6 in 1906 and a ten-year average on September 1 of 54.7.

Hay—The preliminary estimate of the yield per acre of hay is 1.52 tons, as compared with 1.45 tons as finally estimated in 1907, 1.35 tons in 1906 and a ten-year average of 1.44 tons. A total production of 67,743,000 tons is thus indicated, as compared with 63,677,000 finally estimated in 1907. The average quality is 94.5, against 90.4 last year.

Rye—The preliminary estimate of the area of rye harvested is 1.9 per cent less than last year. The preliminary estimate of yield per acre is 16.4 bushels against 16.4 bushels last year, 16.7 bushels in 1906, and a ten-year average of 15.8. The indicated total production is 30,921,000 bushels against 31,566,000 bushels finally estimated in 1907 and 33,375,000 in 1906. The quality of the crop is 92.7, against 91.6 last year.—C. C. Clark, Acting Chief of Bureau, Chairman.

MONEY MAKING IN COLORADO
DO POULTRY.

At the Poultry Institute held in Rocky Ford by the Colorado Agricultural College, O. C. Frantz gave a statement of his experience with poultry which shows the profit under skilled management.

Mr. Frantz started January 1, 1908, with 90 White Leghorn pullets. In the seven months ending July 31, they laid 10,730 eggs, an average of 119 eggs per hen.

He spent for feed, grit, advertising and incidentals for his hens and for 500 chicks which he hatched, \$170.96.

During the seven months he sold eggs for \$326.37, chickens for \$107.15, and used in the family eggs worth at market price, \$33.15, a total gross receipt of \$466.67, and a net return above cost of keep of \$295.71. This is a net return in seven months of \$3.28 per hen.



Pontiac Calypso.

THE STEVENS BROS.-HASTINGS COMPANY.

Brookside Herd.

Liverpool, N. Y.

BLOODED STOCK for October—1908.

Mr. Frantz sold many of his eggs for hatching at breeder's prices. Figuring the eggs at market prices they would have brought \$214.60, and the cost of keeping the hens alone was \$78.75, a net profit in seven months from 90 hens of \$135.85—\$1.50 per hen.

Mr. Frantz exhibited a pen of five months old pullets at the Poultry Institute, August 22, and all of them laid eggs during the meeting. He intends gradually to enlarge his plant up to the full capacity of his land.—H. M. Cottrell, Colorado Agricultural College, Fort Collins.

The Pennsylvania State College continues to give free Correspondence Courses in Agriculture to all who are interested, and who are unable to attend the college in person. Instruction is given in thirty-two different subjects. Being supported by State appropriation, no fee is required for either enrollment or instruction. A circular describing these courses and blank application for enrollment may be had by addressing the Superintendent of Correspondence Courses at State College, Centre county, Pa.

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Transient and Family Hotel, Fire-proof, 200 Rooms; 100 Baths; a well kept Hotel, quiet, yet close to Broadway.

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Single rooms, free baths, \$1.00 and \$1.50
Rooms with bath, \$2.00 and upward
Parlor, bedroom and bath, \$3.50 and upward

M. F. MEEHAN
Proprietor.

We would like to sell twenty cows—2 to 7 years old—most of which are coming fresh this Fall, some recently fresh. Every one sound and right in every particular. Tuberculine tested. They are splendidly bred, of good size, great dairy cows, and will please the purchasers. A great opportunity to secure absolutely sound cows that are wonderful producers at reasonable prices.

POULTRY PACKERS' BREEDS

In order to get definite information upon this question nine poultry-packing establishments were visited, and the conclusions are as follows:

For dressed fowl (hens) Barred Plymouth Rocks hold unquestioned first rank. For broilers or roasters the White Plymouth Rocks and the Wyandottes are considered equally good. By some packers the White Wyandottes are ranked first for broilers. One man stated that White Rocks are more rangy and coarser framed than the Barred variety, otherwise no objection was found to the White or Buff Plymouth Rocks. The extreme popularity of the Barred Rocks is illustrated by the fact that one dealer agreed to pay one-half cent per pound more for this variety than for other chickens. This was, however, discontinued. The only criticism raised against the Wyandottes, when compared with the Plymouth Rocks, was that of smaller size. One packer expressed a preference for Silver over White Wyandottes. As to other American breeds no opinions were expressed.

Outside of the American varieties, the Indian games are ranked highest by those who include them in the list. The Leghorns are disliked for their small size, but are invariably ranked above scrub chickens of a similar size. The Leghorns are especially desired for their yellow skin and legs and plump bodies. Some dealers claim they equal any chicken where the trade demands a small carcass. It was also remarked that Leghorns continue to grow and improve in appearance with age, ranking better as an old hen than as a pullet. The Leghorn cockerels are desirable as broilers, but when older are not wanted, and if purchased, are classed as stags. Of the Asiatic chickens the Langshans are the most popular, Brahmas next and Cochins last. The Langshans are well liked except for the color, being sometimes mentioned next to the Plymouth Rocks. The Brahmas, and more especially the Cochins, are remarkably unpopular among the Kansas packers. This fact is especially worthy of notice when it is remembered that these breeds are spoken of as meat breeds by many poultry writers. The chief objection is because these varieties possess a large frame with not enough meat to cover it. As capons the Brahmas and Cochins are considered among the best.

The following are representative lists as ranked by packers:

- | | |
|---------------------|-------------------|
| 1. Barred P. Rocks. | 1. Barred Rocks. |
| 2. Wyandottes. | 2. W. Wyandottes. |
| 3. Other P. Rocks. | 3. White Rocks. |
| 4. Brown Leghorns. | 4. B. Langshans |
| 5. White Leghorns. | 5. Leghorns. |
| 6. Langshans. | 6. Brahmas. |
| 7. Brahmas. | 7. Cochins. |
| 8. Cochins. | 8. Scrubs. |
1. Barred Rocks.
2. Silver Wyandottes.
3. Indian Games.
4. Langshans.
5. Leghorns.
6. Brahmas.
7. Mongrels.

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Greatest Invention of the Age

It loads Potatoes, Grain, Stones, Etc.
It saves your back—cost low.
If you don't buy it you pay for it any
how—in help
Send for circular.



Simplex Wagon Loader Co., OXFORD, PA.

Insure your horses with the old reliable Indiana and Ohio Live Stock Insurance Co., of Crawfordsville, Ind. This company insures horses, mules and cattle against death from any cause.

Potato prices are soaring at the leading distributing points, and it begins to look as though some of our large potato growers would be "potato kings" before another crop can be grown.

Cow's Relief



THE GREAT COW REMEDY

THE ORIGINAL AND ONLY SPECIFIC
FOR ALL TROUBLES OF BAG AND TEATS

Cows' Relief is a chemical compound especially prepared as a specific remedy for the troublesome disorders of the bag and teats. It is a specific preventive and remedy for Caked Bag, caused by garget, injury, over-feeding or calving; Sore or Injured Teats, Spider in the Teat, Stricture, Hard Milkers, Cow-Pox, and similar troubles. It goes directly to the seat of the trouble, relieves congestion, breaks up bunches that interfere with the natural flow of milk, and causes a normal milk-secretion without resorting to constitutional treatment. Cows' Relief

MAKES EASY MILKERS

and is invaluable to any dairyman or farmer for heifers with their first calf, to remove the soreness and swelling that is frequently the cause of kickers and hard milkers. It is a positive preventive and remedy for Spider in the Teat if applied at the first sign of the trouble.

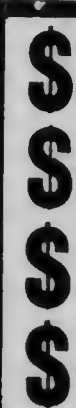
"I try to keep Cows' Relief always on hand. For sores and swelling in cows' bags and teats it is the best thing I ever saw."
B. B. Turner, Broadrun, Va.

We have hundreds of such letters. Ask your Dealer for Cows' Relief. If he can not supply you write to us enclosing \$1.00 for large package prepaid (enough for four or five ordinary cases), Goldline Cow Watch Charm and our FREE BOOK concerning Cow Troubles.

Your money back if you are not satisfied. Guarantee on every package. Or send us your name and one neighbor's who keeps cows, stating how many you each have, and we will send Cow Book and Charm Free while they last.

OUR HUSBANDS MFG. CO., 718 Chapel St., Lyndon, Vt.

100% INVESTORS ARE GETTING MORE THAN 100 PER CENT DIVIDENDS ON EVERY DOLLAR THEY PUT IN **100%**



The Iron Producing Lands Co., is a strong organization of business and professional men, farmers, clerks and office people who seeing the vast fortunes being dug out of Minnesota Iron Lands determined to win some of the wealth Nature has so lavishly bestowed, by banding together to develop such ore lands as they might acquire.

The purpose of the company is first to acquire lands in the ore belt, then to develop such lands for all that is in them. To raise a fund for this purpose a limited number of shares of stock in the company are offered for sale. The price of these shares are \$10 each and promise in a very short time to be worth several times that amount. If we strike as rich a vein of ore as has been found on all sides of us our stockholders will realize big dividends on their investments.

This company has already acquired lands in the very heart of the ore belt. On all sides of our holdings rich strikes have been made and millions of tons of ore is the reward the stockholders will have as a result of their investment.

On all sides of this company's property are drillings showing vast deposits of iron ore, and within 80 rods **forty million tons of ore have been blocked out.** The accompanying illustrations show examples of the active mining operations now going on near our lands.

Now is the time for you to invest in a company owning ore lands ready for development. Don't hesitate and when the big stake is struck regret that you couldn't see ahead far enough to get in on the ground

846 Bank of Commerce Bldg., Minneapolis, Minn.

floor. The ore belt is limited and the opportunity to increase your fortune in this way will soon be gone forever.

The increasing demand for iron makes the development of new iron producing fields a profitable enterprise and one which offers attractive inducements to investors, being a much different proposition than ordinary mining schemes.

Millions of tons of ore underlie the lands in the Cuyuna District of Minnesota. Heavy options for leases have been paid since the discovery of iron ore in this locality. In one instance \$10,000.00 cash was paid for the privilege of exploring fifteen 40-acre tracts. The Northwestern Improvement Company, organized by the Northern Pacific Railway interests to develop iron deposits along their railroad paid a \$40,000.00 fee on a tract of land which only a few years previous was sold by their agent for \$200.00.

The lands owned by this company have every indication of being as valuable when they are developed as any in this rich district. Won't you join with us in this work?

Every dollar invested in shares in this company participates directly in all operations carried on by the company and in all dividends declared.

Don't hesitate to send any amount you care to invest. But if you prefer more information write for **free** prospectus full of facts and figures that explain conditions as they actually exist. Remember only a limited amount of this stock is available, so write today.

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A LITTLE FUN

A LITTLE FUN.

Carefully Selected Here and There.
Some of It as Original as a Joke
Can Be.

Skinned the Donkey.

"When I think of speculation," said a trader on the board of trade the other day, "I think of a man I know. This man, a conservative, suddenly took to gambling. At the end of the flurry I met him one afternoon and asked:

"Well, are you a bull or a bear today?"

"He looked at me for a moment with downcast countenance, looked around for a moment and approached closer.

"Neither," he whispered, giving me a sour smile. 'I was an ass.'"

Joy Not Unmixed; or a Wife's Dilemma.

"Your husband will be all right, now," said an English doctor to a woman whose husband was dangerously ill.

"What do you mean?" demanded wife. "You told me 'e couldn't live a fortnight."

"Well, I'm going to cure him, after all," said the doctor. "Surely you are glad?"

The woman wrinkled her brows. "Puts me in a bit of an 'ole," she said. "I've bin an' sold all 'is clothes to pay for 'is funeral."

A Trial Anyway.

A Scotchman stood beside the bed of his dying wife, and in tearful accents asked was there anything he could do for her.

"Yes, Sandie," she said; "I'm hoping you'll bury me in Craeburn kirk-yard."

"But, my lass," he cried, "only think of the awful expense! Would ye no be comfortable here in Aberdeen?"

"No, Sandie; I'd no rest in my grave unless I were buried in Craeburn."

"It's too much you're askin," said the loving husband, "and I cannot promise ye any such thing."

"Then Sandie, I'll no give you any peace until my bones are at rest in my native parish."

"Ah, weel, Maggie," said he, "I'll just gie ye a three-month trial in Aberdeen an' see how ye get along."—Philadelphia Ledger.

Bossie Knew.

A young lady from New York was visiting for the first time in the country. Seeing a cow looking very savage, she said to an old farmer:

"Oh, how savage that cow looks!"

"Yes, miss, it's the red parasol you are carrying," said the farmer.

"Well," she said, "I knew it was a trifle out of fashion, but I never thought a country cow would notice it."

Kind of the Postmaster.

The young postmaster of a village was hard at work in his office when a gentle tap was heard upon the door, and in stepped a blushing maiden of sixteen, with a money-order which she desired cashed. She handed it with a bashful smile to the official, who, after examining it, gave her the money. At the same time he asked her if she had read what was written on the margin of the order.

"No, I have not," she replied, "for I cannot make it out. Will you please read it for me?"

The young postmaster read as follows: "I send you ten dollars and a dozen kisses."

Glancing at the bashful girl, he said: "Now I have paid you the money, and I suppose you want the kisses?"

"Yes," she said. "If he has sent me any kisses I want them, too."

It is hardly necessary to say that the balance of the order was promptly paid, and in a scientific manner.

On reaching home the delighted maiden remarked to her mother:—

"Mother, this post-office system of ours is a great thing, developing more and more every year, and each new feature seems to be the best. Jimmy sent me a dozen kisses along with the money-order, and the postmaster gave me twenty."

Be Careful of Your Driver.

When Thomas drove up to deliver the usual quart of white mixture, the customer inquired:

"Thomas, how many quarts of milk do you deliver daily to your customers?"

"Ninety-one, sir."

"And how many cows have you?"

"Nine, sir."

"How much milk per day do your cows average?"

"Seven quarts, sir."

Thomas looked after the customer as he moved off, pulled out a short pencil and began to figure.

"Nine cows is nine, and I set down seven quarts under the cows and multiply, that's sixty-three quarts, I told him I sold ninety-one quarts per day. Sixty-three from ninety-one leaves twenty-eight and none to carry. Now, where do I get the rest of the milk? I'll be hanged if I haven't given myself away to one of my best customers."

The Irishman's Prescription.

A man was complaining to some bystanders that he did not know what was the matter with his horses. He had tried everything he could hear of, condition powders and all other specifics—but to no purpose; they would not improve in flesh. A stable boy of Irish extraction, whose sympathies were aroused by the story, comprehended the situation, and modestly asked, "Did yez iver try corn?"

One in Favor of the Standard Oil Co.

They tell a story about Dodd, the Stanard Oil lawyer, when he was a struggling practitioner in Franklin.

There was a Franklin minister who went gunning a great deal, and altogether was rather a sporting character.

At a little church supper one night

BLOODED STOCK for November.

the minister was boasting about his knowledge of horses and hunting, his marksmanship, and so on, when Dodd interrupted him.

"You're a good sportsman, are you?" he said.

"Well," said the minister, not suspecting any trap, "I am not a bad sportsman, if I do say it myself."

"Yet," said Dodd, "if I were a bird I could hide where there'd be no danger of your potting me."

"Where would you hide?" asked the minister.

"I'd hide," Dodd answered, "in your study."

Perfectly Resigned.

An old Scotchman who was threatened with blindness, consulted an oculist.

"Will you have a little stimulant?" inquired the doctor.

The old Scotchman smacked his lips in eager anticipation.

"Ou, aye, I'll tak' a drink o' anythin' you have handy," was the quick rejoinder.

"Ah, that's the trouble!" exclaimed the oculist. "You'll have to stop drinking or you'll lose your eyesight."

The old chap pondered a moment.

"A, weel, doctor, it doesn't much matter. I hae seen everythin' that's worth seein', anyway."

Speaker Reed Could Make a Joke.

Speaker Reed wished to see a man on some pending legislation, and telegraphed for him to come to Washington. The man took the first train available, but a washout on the road made it impossible for the train to proceed further toward its destination. Going to a telegraph station, he sent this dispatch to the Speaker:

"Washout on line. Can't come."

When Reed read the message, he sent back this reply: "Buy a new shirt and come anyway."

You Can't Get Ahead of the Scot.

An American and a Scotchman were on a high hill in Scotland, and the Scotchman was bragging of the extent of the view.

"I suppose you can see America from here on a fine day," said the American, chaffingly.

"O aye, further than that," was the reply.

"Further than that?"

"Aye! on a fine night we can see the mune."

"Do you find it more economical to do your own cooking?"

"Oh, yes. My husband doesn't eat half so much as he used to!"

Hog Raising Pays.

It is an old joke on the Chicago pork packers that they turn into money everything connected with the pig except the squeal. There are packers of pork in other cities outside of Chicago, and as you know there is always a demand for hogs, sometimes at a profitable price, sometimes at a less satisfactory price. But hog raising rarely fails to pay, and if you are thinking of beginning to so utilize your skim milk and waste food products about the farm, it will pay you to write to Arthur J. Collins, Moorestown, N. J., for all the information he has to give about his Jersey Reds. See his advertisement on another page and please mention Blooded Stock when you write.

Blooded Stock, November, 1908

The Eastern Farmer, Dairyman and Poultry Raiser

SUBSCRIPTION—25 cents a year; five years for \$1.00. Single copy 5 cents. Discontinued at end of paid subscription. Samples on application. Canada subscription 12 cents extra.

SUBSCRIPTIONS—Can be sent at any time and will begin with the current issue unless otherwise specified.

HOW TO REMIT—Send money by Postal Money Order, Express Order, Bank Draft, or Registered Letter. One and two cent postage stamps in good condition accepted for small amounts.

CHANGE IN ADDRESS—When ordering a change in address be sure to give former as well as present address.

ADVERTISING RATES—15 cents for each agate line, each month. 5 per cent. discount for cash with order. Average seven words to a line. Fourteen agate lines to an inch measure.

Printed on the first day of each month by C. E. Morrison.

Entered at the Post-office at Oxford, Pa., as Second-Class Mail Matter, May 27, 1899.

OUR ADVERTISERS—We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent us within one month of the time of the transaction and you must have mentioned **Blooded Stock** when writing the advertiser.

EDITORIAL DEPARTMENT—The editors are always glad to examine manuscripts suitable for publication in this magazine. Photographers are invited to submit photographs of subjects pertaining to any phase of farm life. Stamps should accompany both manuscripts and photographs to insure their return, if they are not accepted.

Important Change in Plans.

For quite a long time now we have tried making Blooded Stock an exclusively live stock paper, particularly for the Eastern States.

But the field is too limited—not the geographical field, but the subject, and we have decided upon one more, and we trust, final change.

Beginning with this number our journal will be known as Blooded Stock, The Eastern Farmer, Dairyman and Poultry Raiser.

It will be a general farm paper, making a specialty of nothing, but strong in every phase of farming, breeding, and farm life.

IT WILL BE EXCLUSIVELY FOR THE EAST.

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Write to us. There are in the lives of every farmer, of every wife of a farmer, and of every hired man, and hired girl on a farm, of every one who lives in the country, whether old or young, incidents, experiences, trials, perplexities, and pleasures that would be of interest and instruction and amusement to the rest of us. Let us know about them. Sign your name or not, as you see fit, but let's unite to make this the best farm, home paper ever turned out.

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Now, please help me to feel that I am successfully doing my part in the world, or tell me kindly and gently but firmly wherein I fail.—The Editor.

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Why not! The man of finance has his Wall Street journal; the banker, the American Banker. The American Druggist looks after the interests of its trade, and the school teachers have over a hundred periodicals in their profession. The Dry Goods Economist and Toilettes are marvels in their line, and it would be hard to find a stauncher champion than the Locomotive Fireman's Magazine.

Each and every profession, trade and calling has its "trade" journal, and it's wise that they should.

So, of course, has the farmer, many of them, but Blooded Stock, The Eastern Farmer, Dairyman and Poultry Raiser happens, designedly, to be the only monthly journal published exclusively for the farmer of the Eastern States, and its purpose is to herald and fight his interests against all comers.

But to do it unselfishly and with malice toward none.

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GET A YEAR'S SUBSCRIPTION FREE.

We have a friend who was born on a farm and lived and worked there until almost twenty, but whose business has kept him in the city for the last twenty-five years, who has asked us to say to you he believes so firmly that the future of every young farmer and his bride will be so much brighter and happier if they start out with a good farm paper to grow up with, that if they will allow him to do so he would consider it a privilege and favor to pay for a year's subscription to Blooded Stock, The Eastern Farmer, Dairyman and Poultry Raiser.

All you need do is to send us within two or three weeks of the wedding your name and address, and the date of your marriage, and the paper will be mailed to you for twelve months without any expense to you. Remember, the paper will not be sent to you beyond the time for which the subscription is paid. Of course you will be notified of expiration and we will be glad of renewal.

IS THE GOOD BLACKSMITH ENTITLED TO PROTECTION?

Should Horse Shoers be Licenced?

BY PROF. JOHN D. FITZGERALD, CHICAGO.

WHY should not the horse shoer be licensed to practice the same as a doctor? The doctor is compelled to master the intricacies of his profession before he is permitted to enter upon the practice of that which

means life or death to human beings. The horse shoer must work four years as an apprentice to make himself a good floor-man. Then it takes three years more to complete him as a foreman and a practical man—seven years altogether before he is technically capable of knowing how to shoe a horse. And he must then continue his study and practice the same as a doctor in order that he may be thoroughly up-to-date in the latest methods and keep his hand in. I believe we have now reached that stage where a horse shoer should be examined by a state board and qualified with a license to practice. Such a law has been passed in several states and I understand there are other states who are about to follow.

Below are given a few specimen cases of shoeing practice that are common in most shops.



Fig. 1



Fig. 3



Fig. 5

Illustration No. 1.—We have here the horse's foot that gives the shoer the most frequent and common trouble, corns. We will not go into detail as to what brings on these corns, as we sometimes find them on colts that have never been shod. When a horse is brought to the shoer with a corn, it is generally lame or sore from it. I find that it is not so much in the kind of a shoe you put on the horse's foot as it is how you treat the corn before shoeing. All the hard horny hoof should be well pared out around the corn. That will leave the corn free and almost any kind of a shoe—with a leather pad, tar and oakum in a bad case—will relieve the corn at once.

Illustration No. 2.—Here we see a foot in both inside and outside heels and sometimes the corns are very deep seated, but you must go to the bottom and remove the wall as much as possible from pressing on the corn and also trim the sole down well around the corn. Where there are corns in both heels and the horse is sore, a bar shoe with a leather pad is sometimes necessary.

Illustration No. 3.—We find this foot has a broken bar on the inside. They are very sore things and there is but one cure for a broken bar—to remove the bar as much as possible. You will see by this illustration the bar is taken entirely out. Shoe with a bar shoe, leather pad, tar and oakum and it will soon heal up.

Illustration No. 4.—We find a healthy looking foot with a diseased frog known as the Thrush. Horses do not generally go lame with it, but it very often destroys the shape of the foot. All dead and diseased parts of the frog should be removed and with warm water applications the foot will be restored to a healthy condition.

Illustration No. 5.—This shows a badly contracted foot. It also has been mismanaged and a poor mechanic has been at work upon it. The heels were allowed to



Fig. 2



Fig. 4



Fig. 6



Fig. 7



Fig. 9



Fig. 11

grow to high and if that horse shoer had he would have kept those heels down in proportion to the toe, which alone would have prevented such a bad case of contraction. I would recommend that the heels be kept low by the horse shoer in all cases where the feet are inclined to be contracted.

Illustration No. 6.—This represents the same foot properly dressed, with the heels leveled down well and the lowering of those heels has almost removed the contraction from the foot. You will notice those heels are not open, or a V shape taken out of the heel; as what is commonly called "opening the heels" and leaving them grow too high, brings on the majority of the cases of contraction in horse's feet.

Illustration No. 7.—We have here a badly contracted foot, caused by opening the heels and a general unleveling of the foot, where a poor mechanic has been at work.

Illustration No. 8.—This shows us a foot where a good mechanic has been at work, but sometimes a good workman will make a mistake and have a wrong idea, as in this instance, where he has pared the heels too low. While the heels should be pared down in proportion to the toe, still they should not be weakened. This is a matter of much discussion between good mechanics how to bring out the true leveling of a horse's foot for the reception of the shoe.

Illustration No. 9.—Here is a foot properly leveled for the reception of the shoe.

Illustration No. 10.—We are shown here the shoe properly fitted by a good workman. The shoe is fitted level; the heels of same are not sprung and it is properly nailed on.

Illustration No. 11.—This illustrates a poor job of clinching and finishing a foot and also a poor job of driving nails.

Illustration No. 12.—We have here the same foot with the shoe properly nailed on; the foot properly finished and the heel nail left out, as it is better to leave a nail out altogether than to drive it poorly into the foot.

These few illustrations give some idea of the possibilities of injury to a horse by malpractice. The right to earn a livelihood in any trade does not carry with it the right to destroy. Shoeing is a profession, acquired only by the hardest manual exertion as well as by the largest experience and closest study. The remuneration should be accordingly. The ignorant, lazy and unskilled man, when not so known, is now in states without license on a prity with the most skilled, studious and experienced, a menace not alone to owners but to the intelligent, studious and hard-working shoers. He destroys the property of the one and injures the business of the other. He is a curb upon the ambition of the profession to find its due reward for the highest class of service and society would be bettered by his conclusion until he has become sufficiently skilled.

The Editor will be very glad of comments on this subject from readers of Blooded Stock.



Fig. 8



Fig. 10



Fig. 12

OUR HORSES

SPECIAL PURPOSE HORSES

Breeders Should Know What Sort of Colts They Want

In every line of manufacturing the first thing determined upon is the result to be accomplished, and then everything is shaped toward that object.

And it's just the same in all well regulated lines of business. Everything is mathematically figured out and planned beforehand. To go ahead haphazard could mean nothing but confusion and absolute ruin.

Just think how absurd it would be for the cotton manufacturer, for instance, to take an order for a certain grade of cloth, and then have to feed his looms with yarns until the machinery happened to turn out something that his customer had bought.

There was a time when far too much of the farmers' efforts were just so illy directed. Hit or miss and mortgage the farm when cash ran low was the plan pursued.

But slowly and surely the farmer is becoming just as methodical, just as careful, just as shrewd and calculating, just as business-like as his brothers in other lines. And the greater the attendance at our agricultural schools, the more influential the Farmers' Institute and Grange work become, the less guess work will then be in the grandest profession of all—Agriculture.

There is always a good market for certain well recognized types of horses, and breeders should know what these standards are and breed up to them. If no more incentive is needed than profit, remember the margin on one good horse for which a buyer is looking is considerably greater than on two or three on which you are forcing the sale.

Of course in the East the important demand is for a draft horse, so let's consider him first and most fully.

THE DRAFT HORSE.

Weight. The draft horse in demand should run from sixteen hundred up when in working condition, and this weight should be made up largely of strong bones and powerful, well developed muscles.

He should be in good flesh but not overburdened with fat. Be careful of this.

Weight in a draft horse enables him to get down to his load and to use his strength to the greatest advantage and with least wear and tear.

Height. Around sixteen hands, not under, and not much above is the standard height. The exceptionally tall fellows are not wanted except when especially well built, and then only for single work, or in a three-horse team. They are too hard to match.

Makeup. Strength and massiveness must be suggested by the general build of the animal. Broad, deep, round and symmetrical; low down, stocky and compact, on short, clean legs describe the choice of the buyer every time.

Quality. Means general air of breeding and refinement. Clean cut and "high grade" in muscle, bone and skin. The hair soft and silky; spirits high; action snappy and vigorous. Powerful yet graceful. Light in action but with the weight back of it. The lines just as symmetrical and beautiful and graceful as in the trotter, and yet every one indicating unmistakably the terrific strength and power latent in the perfect animal.

Action. A draft horse must be a good, fast, straight, level walker, and able to keep it up without tiring. His

joints must be easily and fully flexed, and his feet must advance and be set down without deviation from a straight line. They should be raised quickly, fully and turn up and show plainly when going from you, and then set down squarely and firmly. There should be no paddling, dishing, cutting or interfering. The hind legs should be neither too close together nor too far apart, and the forelegs should not roll. Knee action should be free and comparatively high.

Temperament. A draft horse must be intelligent, quiet, free from bad habits and tricks, and of a good, energetic disposition. A lazy nimal is more subject to disease.

Head. Must be of good size and thoroughly uniform with the rest of the body. A coarse, gross, angular head is to be avoided.

Muzzle. Should be compact, fine, and the skin and hair should be of good quality. The nostrils must be large and flexible, and the inside pink in color. The lips should be thin, firm and not drooping.

Eyes. Mild, large, bright, clear, not bulging or staring, and the lids should be free from wrinkles.

Forehead. Good width between the eyes is an indication of intelligence.

Ears. Medium size, well shaped, and in proportion with the rest of the body. Should be well carried and neither too rigid nor alert.

Lower Jaw. Angles should be wide and the space between the jaws should be clean.

Neck. The neck should be strong, massive, well arched, of sufficient length and well covered with muscles. It should be snugly and evenly moulded into the shoulders and neatly joined to the head. Mane should be full and lying properly. The windpipe should be large and the jugular vein without injury from bleeding.

Shoulders. The shoulders should slope moderately so as to form a comfortable and secure bed for the collar. They should be well covered with muscles, and fit snugly into the neck and body. There should be no pronounced angles or lumps. Withers should be fairly high.

Arm. Should be short, strong, thrown back far enough to bring the leg into proper position to support the weight of the forequarters, and well muscled. The elbow should be prominent, strong and not carried too close to or too far from the sides.

Forearm. The desired forearm should be long, broad, wide and fully muscled above, and balance free and clean from meatiness.

Knee. Large and strong but free from meatiness, puffs and bony growths. They should be wide, straight, deep, properly set and not tied in under joint.

Cannons. Should be large, short, clean, wide, flat-looking free from meatiness and puffs. Muscles should be well developed at sides and behind, and "feather," if present, ought to be fine and silky and springing from the rear part only.

Fetlocks. Wide, deep, straight and strong. "Feather" should be fine and silky, indicating fine quality bone.

Pasterns. Should be wide and strong and with a slope of about 45 degrees; the front of the hoofs about 50 degrees.

Feet. Hoofs should be of sound texture, waxy, free

from wrinkles or ridges and of good size, uniformly shaped. Hoof-head should be prominent, the heels wide and not too close to the ground. Sole should be slightly concave, not flat or especially convex. The frog ought to be large and elastic and bars prominent.

Chest. The chest should be of sufficient size, width and depth for plenty of capacity, vigor, endurance and easy keeping qualities.

Ribs. Should be well sprung to give the digestive organs plenty of space. The last ribs should be deep and come close up to the hips to make a close "coupling." A round, deep barrel indicates fine digestive capacity, vigorous constitution and capabilities for hard work, when properly muscled.

A low-carried flank goes with this "figure" and means an easy keeper.

Back. Short, wide, strong, straight, thick back giving room for attachment of powerful muscles, which, with the spring of ribs, gives it shape.

Loins. Ought to be equally well formed and muscled as the back.

Hips. The hips of the draft horse should be wide, strong, and well muscled, free from prominent angles, smooth, and neither too straight nor too drooping in croup. The great point is that this portion of the horse must be magnificently muscled, as must also be the thighs and quarters. The tail should be well set and carried strong and well haired.

Stifles. The joints ought to be strong, thick with muscles, showing plain indentation above and below the knee cap, and neither too close nor too far from the body when resting or moving.

Gaskins. Bones must be large, wide and deep, and muscles strong and fully developed.

Hocks. Because of the tremendous strain that is put upon the joint it should be large, clean, and free from meatiness, spavins, puffs and all bony growths.

THE CARRIAGE HORSE.

Despite the tremendous increase in automobiling carriage driving has still many thousands of adherents. The requisites of the carriage horse are generally as follows: He must be not under 15 hands for mature horses; smooth, compact, and symmetrical conformation; neck of good length, inclined naturally to arch; sloping shoulders; well-set legs of medium length; sloping pasterns and good feet; short, strong back; well-sprung ribs well ribbed up to coupling; smooth loins; full flanks; straight croup, with well-set tail; full round quarters.

THE ARMY HORSE.

Uncle Sam is one of the most exacting buyers. He will not have a gray, white or cream-colored horse at any price, nor will he knowingly buy one younger than five or older than eight years. For the cavalry service he rejects all mares, however perfect, and all geldings under 15.1 hands, or more than 16 hands; likewise all whose weight is less than 950 pounds or more than 1,150 pounds. And even if a horse meets all these requirements he will not be enlisted if he is not sound and free from all vices and bad habits; intelligent, docile and showing prompt, free action at the walk, trot and gallop.

CARE OF THE MARE AND FOAL.

If on account of the weather the mare must foal in a box-stall, have it roomy, dry, and well bedded, with no holes or hanging straps or harness into which the foal can push its head. It pays when the foals are expected to have someone on the watch at night to call expert help when needed.

A clean foaling place, plenty of clean bedding and no handling are usually all that are necessary for the prevention of navel infection. Binding the cord in boric acid powder and pure cotton is a great precaution. Interfere very little with the mare or her foal unless obliged to do so. Get them out in the sun in a clean place as soon as possible. Carefully observe stools of colt for first few days and use injections of warm water for any hard masses so likely to accumulate in rectum. When colt is two weeks old, the mare may safely be put to light work. It is well to leave two colts in one box-stall with plenty of oats and good hay. Mares and colts soon become accustomed to this arrangement, and it is better than to allow colts to follow their mothers. In a few months they depend as much on oats and hay as on the milk, and never stop growing when weaned. In case you have no work for the mares and they are allowed to stand around, colts should have oats, or oats and bran after they are two months old.

JOINT DISEASE.

My colt is five weeks old. He was all right for the first two days but after that it got so stiff he couldn't stand up. If I help him up he sucks like a healthy colt. I gave epsom salts for constipation and it helped, but the stiffness does not go away. Mare is fed grass and hay, ground barley and middlings. What shall I do?

It is our opinion the colt has navel and joint disease caused by infective matters which entered his system by way of the navel at birth. Cases like this may be prevented by wetting the navel with a 1-500 solution of corrosive sublimate when the foal is dropped and then repeating the application twice daily until the navel is perfectly healed. At the present stage give the foal twice daily a tablespoonful of a mixture of half an ounce of tincture of echinacea and seven and one-half ounces of water. If joints are affected have a veterinarian.

ITCHING LEGS.

My horses stamp their hind feet and bite them until they bleed. What shall I do for them?

When the legs are covered with long hair, a filthy condition will cause this intense itching. Just wash the legs carefully and thoroughly with soap and hot water and rub perfectly dry with sawdust. This is very particular and they must not be dried in any other way. Three times a week, after the washing, saturate the affected parts with a creamy mixture of flowers of sulphur and sweet oil or lard oil to each pint of which add half half an ounce coal tar dip. Have the horses thoroughly groomed once daily and during hot weather do not feed them corn.

BAD COUGH.

I have an old horse who has a hard cough, and it's getting worse all the time. Am inclined to think he has the heaves slightly, but not enough to bother him.

Answer—Relief will probably be effected by giving him a tablespoonful of tincture of lobelia on his feed twice a day. Do not feed too much hay and wet what you do feed.

CHRONIC BOWEL TROUBLE.

I have an old horse whose bowels are too loose. Change of feed does not effect him one way or the other, nor does his trouble seem to affect his working.

Answer—Get him used to one kind of feed and do not change. Never water before starting on a drive but wait until you get back. His trouble will probably not interfere with his doing lots of work, but if it has run for a considerable length of time he will not get better.

THE COW AND THE DAIRY

HOW TO PICK OUT A DAIRY COW.

THIS is an old, old story, and yet it's so absolutely at the basis of success in farming nowadays that it will bear repeating. In fact, we are sorely tempted to keep these suggestions right at the top of this department constantly, and are sure it would be to the profit of many of our young farmers, and old ones too.

Head. The head of a good dairy cow should be clean cut and bony, of good length and broad between the eyes. The eyes ought to be large, mild and intelligent. The neck should be slim and long and well connected with the head.

Shoulders. The shoulders ought to be light and thin, with sharp withers. The back bone should be strong and rise above the shoulder blades.

Ribs. Should be flat and wide with plenty of room between them, and well sprung after leaving the shoulders, so as to give plenty of room for heart and lungs. They should enlarge gradually toward the hind quarters to provide lots of food storage and digestion room.

Hips. The hips should be wide; rump bones wide; pelvic arch high. Well opened between thighs with lig arching flanks, giving plenty of room for the udder.

Udder. The udder ought to be mellow and spongy and should reach well forward and well up behind, with teats well apart and attached securely to the udder. Teats ought to be of medium size and free from lumps.

Milk Veins. The milk veins should be large, crooked and of good length.

Skin. Should be mellow, oily and soft.

Wedge Shape. Is one of the most essential requisites of a profitable dairy cow, and is usually accompanied by a good constitution. She should be wedge-shaped, looking at her from her head; she should form a wedge with her top and under-lines, as well as over the shoulders and through the heart.

Give such a cow good care and plenty of proper food and you'll have no fault to find with her or with your profits.

WHY THE CREAMERIES RETURN SOUR CREAM.

A correspondent writes: "I am selling cream to the local creamery and have had several cans returned with no excuse from the creamery man excepting that the cream was sour. He gives me considerable talk about sour cream that I do not understand. Will you please explain why sour cream is not as good as sweet cream as long as the buttermaker is obliged to sour it anyway before he churns it?"

Sour cream that is perfectly clean and not lumpy or ropey nor curdled will make a very good quality of butter but to make a product of superior quality it is necessary that the buttermaker have the souring of the cream under his control. It is a known fact that there are a great many different kinds of acids. There are species of acidity that produce very undesirable flavors in the butter while on the other hand there is just one particular species of sourness that is necessary in making butter with what we call the delicious June flavor. The up-to-date buttermaker keeps a culture for producing this desirable sourness. He keeps it in the creamery and develops it from day to day and adds it to his sweet cream, so that all of his cream is inoculated with this acidity that produces the butter flavor that commands the highest price. Therefore when he receives cream that has soured on the farm he cannot mix it with the cream that he has soured with his commercial culture. It must be kept separate and churn-

ed separately for if it were mixed with the good cream it would overcome the influence of the desirable acidity and impair the flavor of the butter. At some creameries all grades of cream are taken and the sweet cream is kept separate from that which comes to the factory sour and is churned separately and a better price is paid the patrons that bring the sweet cream. We believe this is a better practice than to reject the sour cream entirely.

DON'T CONDEMN THE OLD COW TOO SOON, NOR THE HEIFER BEFORE SHE HAS A FAIR CHANCE.

It is a well established fact among those who combine breeding with dairying that after a cow has raised two or three calves her value as a breeder may be pretty accurately determined, and she has also arrived at the age of her best service in the dairy and as a calf producer. The heifer is not the best mother, usually, but improves in maternal qualities as she approaches maturity. It is therefore very uncertain in results to turn the heifer off because she does not with her first calf equal the old cow in her produce. It is also bad management to turn the old cow off because she is old, when she has proven a valuable dairy animal and breeder of excellent calves. Many an old cow has produced a calf that would sell for three or four times what the old cow would sell for.

It takes just a few days to find out how much a cow is worth. In a recent test covering the cows of eighty-two creamery patrons the best cows made \$42 per cow, while the poorest ones made only \$7.54 per cow—a difference of \$34.55 per cow.

How can you expect to make money on the farm unless you test your cows, and test them from time to time, and keep record of the tests. The man who owned the \$7.54 cow certainly could not have known she was such an unprofitable animal.

THE SAVING BY USING A HAND SEPARATOR.

The farmer or dairyman who handles the milk from five or more cows for profit in butter making or cream selling should own a hand separator.

The hand separator, working under favorable conditions, leaves from 1.50 to 1.20 of a pound of butter-fat in 100 pounds of skim-milk. The gravity and dilution (water separator) systems of securing the butter-fat, will leave, under the most favorable conditions, from 1-3 to 3-4 of a pound of butter-fat to each 100 pounds of skim-milk.

The farmer who handles the milk from ten cows which produce 80,000 pounds of milk per year, should not lose over 40 pounds of butter-fat in the separator skim-milk. By the water separator (dilution) or gravity methods there would be a loss of 275 to 600 pounds of butter-fat per year. Figuring butter-fat at 20 cents a pound, there would be a loss between the hand separator and the other methods of from \$45 to \$110 a year. Thus the saving in one year would pay for the separator, and it would be good for many more years of service.

Advantages of the Hand Separator.

1. The machine not only secures practically all the butter-fat, but it delivers the skim-milk in a sweet, warm and undiluted condition ready for the calves or pigs.
2. Less labor and dairy utensils are necessary than with the other systems.
3. The cream is of uniform richness. It has removed much of the fibrous and foreign matter.
4. The milk has had no chance to absorb bad flavors

and odors from standing around and the cream is produced in excellent condition.

5. There is a gain in the quality as well as the quantity of the butter obtained.

6. City dairies can improve the quality of their milk very much by running it through the separator and afterwards mix the skim-milk and cream before bottling it. The milk is not only aereated, but many of the impurities are removed, thus making it sweeter and giving it better keeping qualities.

Size of Separator to Buy.

Hand separators may be procured in sizes varying in capacity from 150 pounds of milk (18 gallons) an hour to 1,200 pounds (144 gallons) an hour. The prices vary from about \$40 for the smaller size to \$175 for the larger size.

The capacity of the machine per hour should not be less than 50 pounds for each cow milked. A 10-cow herd would then require a 500-pound capacity separator, and an 18-cow herd, a 900-pound capacity.

Make of Separators to Buy.

There are many makes of good separators now found on the market which are sold as cheaply as many of the poorer ones:

1. Buy a standard machine—one that has a good recommendation and is known to be durable and reliable.
2. Don't buy the average "catalogue house" machines. They often do good work, but as a rule do not last long enough. Many of them are cheap in construction as well as in price.
3. Buy a well known machine—one that is guaranteed in construction, material and clean skimming.
4. Secure the machine from a "nearby" reliable agency.

H. M. Bainer,

Professor of Farm Mechanics, Colorado Agricultural College, Fort Collins.

\$2972.20 FROM 22 COWS.

C. S. Morris, of Portlandville, Otsego county, New York State, has a few cows that have been doing pretty good work for him, thank you. Such results could only be accomplished by the best of attention and care, coupled with intelligent selection of cows for their milk producing qualities. The record for the past three years shows that Mr. Morris has made considerable advance in the producing ability of his herd. During the year 1905, 20 cows produced 9,276 lbs. of milk each, and in the following year 21 cows gave an average of 9,554 pounds each. In 1907, the banner year, 22 cows gave an average of 10,008 pounds each, which was sold at an average price of \$1.35 per hundred pounds, or 2.87 cents per quart. This gives an average income per cow of \$135.10. It is interesting to note that these cows are all grade Holsteins and 15 of the 22 cows milked during 1907 have been in the dairy from three to five years.

A SERIOUS MISTAKE NOT TO FEED GRAIN TO CALVES AND GROWING HEIFERS.

In addition to clover, timothy and other fodders, oats, bran and corn form an excellent grain ration for the growing calves and heifers. We consider oats one of the best feeds for developing the breeding qualities in our young animals and believe that if they were more commonly used there would be very little complaint about shy or non-breeders.

It is largely on account of not feeding for development that farmers have failed to grow profitable herds of dairy cows. They have started well, but have failed to feed well, and the calves, growing up into cows without having their feeding and milking capacities developed, have caused their owners to become dissatisfied with the cross, and they have spoiled all progress by changing sires and

buying a bull of some other breed, thus forming blood lines no better than the first and far less prepotent.

By sticking close to one breed until four or five generations have been made, and at all times feeding for development, there should be no difficulty in building up a herd of dairy cows that would be a credit to their owner and pay handsome profits on the feed consumed.

DAIRY FARMER HAS BETTER AVERAGE PROFITS.

The dairyman will have his ups and downs, but his net profit will not vary so much from year to year as that of the average farmer.

If the dairyman uses good judgment, knows his business, and does not get sick, he will not need to have had much experience to reckon at the beginning of the year about what his net profit will be at the end of that year.

PROGRESS OF THE CO-OPERATIVE IDEA IN CREAMERIES.

Of the 6000 creameries in the United States something like 1800 are co-operative. The proportion of co-operative concerns is gradually increasing. The annual output is about 500,000,000 pounds, which sold during 1907 for an average of about 28 cents per pound. This means a gross return of approximately \$140,000,000. There is no way of determining how much of this is net profit, but a careful investigation of several individual cases shows that the co-operative creamery patron gets more for his work and his investment than the man who sends his milk or cream to a proprietary creamery. Like all other human institutions, co-operative creameries are occasionally unprofitable. The proportion of failures is growing smaller each year as the dairymen become familiar with handling their own business.

GIVE THE CALVES A LITTLE GRAIN.

The young calves being raised on skim milk will surprise you if you give them a little grain regularly. A few handfuls of oats do not cost much and the calves pay for it well. It keeps the bowels in condition and puts on sound meat and bone.

WHIPPING CREAM.

The best results are from cream containing 23 per cent. fat, but cream twenty-four hours old containing from 20 to 25 per cent. will answer the purpose very nicely if it is kept cool enough while whipping.

CAKED UDDER.

"My cows have been milking four weeks and have sore, hard bags and give thick milk."

There are various reasons for this condition, one of which is retention of milk in the udder by the cow, who will occasionally not let it down, or it may be the fault of the milker who is unable to relieve the cow from the contents of the udder. In either case, the cause must be ascertained and same removed without delay.

The cow's udder sometimes becomes caked and hard from a bruise or chill. The application of hot fomentations and thoroughly massaging the udder is helpful. Lard may be used for rubbing and poke root is good and so is antiphlogistine, which may be thoroughly spread over the inflamed part of the udder and held in place by a bag.

VETERINARIAN IS NEEDED FOR THIS COW.

"My cow walks about all hunched up, and has poor appetite. She passes small quantities of cloudy water at short intervals. She has passed blood, once clotted."

This indicates bladder trouble and it would be unwise for us to advise you otherwise than to have a veterinarian.

OUR FEATHERED FRIENDS

November Warnings

THE pullets should now be commencing to lay. If they are to continue to shell out eggs during the winter months great care must be taken to have their quarters absolutely free from draughts and sufficiently warm at all times to prevent their combs from freezing.

If your flocks should be Plymouth Rocks, particular pains will have to be exercised to keep them active. No breed will excel the Plymouth Rock as winter egg producers if this essentiality is paid particular attention to.

By nature, the Plymouth Rock is a lazy fowl and will not work for her living if she can help it. This gives her a chance to lay on fat and an over fat fowl is never profitable from the egg basket standpoint. The grain ration should consist entirely of oats or small grains scattered through a foot or more of litter so that the hen will have to scratch over every mouthful.

Ground clover should be the basis of the mash ration. 50 to 60 per cent is not too great a proportion.

With Rhode Island Reds or breeds of the Mediterranean class, satisfactory results can be obtained by placing the feed in a large hopper and leaving it continually before the fowl.

With Plymouth Rocks such a course would be equivalent to inviting disaster.

The poultry can stand a good deal of cold but a very little draught is sure to produce colds and consequent roup. Roup in a flock if it does not kill the victim will surely stop the egg yield. The greatest care should therefore be taken to see that the roosting quarters are free from draughts.

Too much importance cannot be placed on the value of alfalfa in the daily ration of your poultry for winter egg production. By using it the grain food could be reduced fully one-half and at the same time the egg production will be considerably stimulated. With alfalfa as the basis of the mash ration the hen that will give a \$2 profit margin will considerably increase the profit.

RHODE ISLAND REDS.

A Breed Whose Excellent All-round Qualities Are Making Them a Favorite With Poultry Breeders.

In selecting a breed for winter eggs, no mistake will be made in purchasing a flock of Rhode Island Reds. As winter layers they have no equal among the breeds recognized in the American standard of perfection.

The Rhode Island Red is essentially an American breed, directly descendant from a single red Malay cock bird imported from the Philippine Islands, so tradition tells us. This bird was brought over by Capt. Stephen Merrihue, of Mattapoisette, Mass., and presented by him to "Bill Tripp," one of the earliest poultrymen of Rhode Island. Tripp put it with his native hens, and, saving the eggs, set them, and thus began producing a strain of stock superior to anything heretofore known in these regions.

He also let some of his friends and neighbors have some of these eggs and they began breeding what they called "Tripp's fowls." In this way the blood of the Red bird was pretty well distributed throughout Rhode Island.

The "Nutmeggers" do not take too much care of their poultry. The houses are very draughty, very little at-

tempt is made at cleanliness and the fowls are frequently fed but once a day and on some farms but once a week—that is, corn and other dry feed are constantly in the hopper before them. But notwithstanding this, these Red birds continue to shell out good-sized brown shelled eggs in abundance.

Since this breed has been admitted to the standard of perfection under the name of Rhode Island Reds, it has rapidly grown in popularity, particularly in the Atlantic States. They seem to be possessed with great hardiness and more all-round good qualities, and less faults, than any other breed, and their growth in popularity is strictly on their merits. They are especially noted for their activity, which is the foundation of many of their good points. It keeps them healthy, makes them lay and allows you to force them without making them overfat.

As a breed for the farmer they stand without an equal. The chicks are rugged and can stand roughing it, for they inherit a hardy and vigorous constitution. They mature quickly, are good setters, careful mothers, and as vigorous as any cross-bred stock. In conformation they are somewhat like the Rock. Owing to their solid build they equal in weight other birds of larger size. Their flesh is of a rich, yellow tint, and they have no dark pin feathers.

WHAT DOES IT COST A YEAR TO KEEP A HEN?

To thousands of the plain people in the United States this question is exceedingly pertinent and important. Realizing this, the Boston Herald some time ago took up the matter and offered prizes for the three best answers. The first prize was won by a Massachusetts man who estimated that it cost four and one-half cents a week for each pullet, or \$2.21 a year. A New Hampshire woman won the second prize, and she reckoned cost as follows: Oats, 58 cents; wheat, 39 cents; hen ration, 28 cents; cracked corn, 16 cents; cabbage, 4 cents; ground oyster shell, 2 cents, making a total of \$1.47. Still another Massachusetts man won third prize. He found the cost of each hen to be about \$1.75 per year. This includes animal food. He feeds about four ounces of whole grain per day, also a hopper mixture of bran, middlings and corn meal. He says a hen may be kept alive on 80 cents a year, but to turn a profit, double that amount should be expended.

According to these three reports the average cost per hen would be \$1.80.

In writing upon this subject, Edgar Warren suggests an experiment. If the cost of feeding one hen fifty-two days is equal to feeding fifty-two hens one day, by feeding fifty-two hens one week you can ascertain what it costs to feed one hen a year. Obviously, we are obliged to strike an average as no two hens eat the same amount or the same amount at all times.

Experimenting along this line, Mr. Warren found that fifty-two hens in a pen will consume a bag of corn in a week costing \$1.50, or a bag of wheat costing \$2.00, or a bag of barley costing \$1.90, or a bag and a half of oats costing \$1.95.

But the farmer and housekeeper can reduce the feed bill by the addition of table scraps, waste vegetables, etc., to the ration. The farmer's hens can range for six months in the year, needing to be fed only a little corn. During the other six months waste from the cellar and

table keeps down the cost.

He sums up the whole matter as follows: "It costs the average poultryman about \$1.50 a year to keep a hen. It costs the farmer not more than \$1.00.

Now think what a tremendous advantage the farmer has in raising poultry for market or for eggs. And there is always this fact to remember—there is always a good market, the price depending somewhat on the style in which you deliver the "goods."

BY ALL MEANS RAISE GEESE.

Geese are by far the cheapest and easiest of all domestic fowls to raise. They require but little shelter at any time, and, if given plenty of pasture, will gather the largest portion of their food from the fields. They are very easily and quickly fattened for market and bring fair prices. Geese, for breeding purposes, should be purchased in the fall.

Never mate over two females to one gander. Never use females less than two, or Ganders over four, years of age. Allow them to run in a pasture where they have plenty of grass to eat and water to swim in.

In winter and during the laying season feed them lightly the following ration, morning and evening, by measure: Bran, four parts, shorts two parts, cornmeal one part, and in winter, cut clover, steamed, four parts, is added.

A goose will lay 30 to 40 eggs in a season if not allowed to set. The eggs require 30 days for incubation, and invariably hatch well. Goslings are removed from incubators as soon as dry and placed in brooders, where heat for the first 24 hours is 90 degrees. After the first 24 hours the heat is reduced one degree daily until the goslings are ten to fifteen days old.

Beginning the third morning after hatching goslings are fed as follows, four times daily, by measure: Bran one part, rolled oats one part, cornmeal and shorts one part. This is dampened with skim milk until it will crumble. Grass, grit and drinking water are always before them. Water is given in fountains, so they cannot get into it. They are fed as mentioned until they are eight weeks old, when those for market are closely confined to be fattened and fed as follows, three times daily, all they will eat: Bran two parts, shorts one part, oil meal and beef scraps one part, cornmeal one part, dampened until it will crumble. Whole corn is frequently given. Green food, grit and water are always before them.

GETTING DUCKS AND GEESE READY FOR MARKET.

They can be, and often are, dry picked, in the same manner as chickens and turkeys. They should be scalded in the same temperature of water as for other kinds of poultry, but it requires some time for the water to penetrate and loosen the feathers. Some parties advise after scalding to wrap them in a blanket for the purpose of steaming, but they must not be left in this condition long enough to cook the flesh.

Do not undertake to dry pick geese and ducks just before killing for the purpose of saving the feathers, as it causes the skin to become very much inflamed and is a great injury to the sale.

Do not singe the bodies for the purpose of removing any down or hair, as the heat from the flame will give them an oily and unsightly appearance. After they are picked clean they should be held in scalding water about ten seconds for the purpose of plumping, and then rinse off in clean, cold water. Fat, heavy stock is always preferred.

Before picking and shipping poultry should be thoroughly dry and cold, but not frozen; the animal heat should be entirely out of the body. Pack in boxes or

barrels; boxes holding 100 or 200 pounds are preferable, and pack snugly. Straighten out the body and legs so that they will not arrive very much bent and twisted out of shape. Fill the packages as full as possible to prevent moving about on the way. Barrels answer better for chickens and ducks than for turkeys and geese.

BREEDS AND AGE FOR EGGS.

At the Ontario Experiment Station, thirteen Plymouth Rocks laid 693 eggs, the average cost per dozen being 6.02 cents. During the same time thirteen Andalusians laid 835 eggs, cost per dozen being 5.34 cents.

Hens over two years old, Director W. R. Graham points out, are seldom good layers. "Leghorns, Minorcas, etc., are sometimes good during third and fourth years; but, generally speaking, Rocks and such fowl are little or no use as layers after second year, being inclined to become excessively fat.

"For summer eggs the lighter breeds or late-hatched pullets of heavier breeds are best.

TURKEYS TO BE HIGH THIS YEAR.

Market experts tell us that the price of turkeys this fall will probably be high, and more satisfactory than last year.

Owing to the disappointing market last season fewer turkeys were raised this spring, and grain is so scarce and high priced.

Of course the turkey is a great forager, but yet he eats a lot of grain, and it costs considerably more to raise a turkey than it does a chicken.

They are not easy for us all to raise either.

NEW SECRETARY FOR A. B. P. ROCK CLUB.

Mr. Arthur Smith, William Ellery Bright's Superintendent at the Grove Hill Poultry Yards, Waltham, Mass., has been chosen to succeed Mr. H. P. Schwab, of Rochester, as Secretary-Treasurer of the Barred Plymouth Rock Club. Mr. Smith is one of the best-posted fanciers of this club in America, and that he will make a success of his new post goes without saying. The Barred Plymouth Rock Club is probably the strongest specialty club in this country and much of its success has been due to the untiring efforts of Mr. Schwab in the last 10 years.

A VALUABLE BOOK.

The Kansas State Board of Agriculture has gotten out their quarterly report for September, 1908, in the shape of a bulletin devoted to descriptions and illustrations of the land and water fowls most generally reared in America, with directions for their breeding, maintenance and profitable management. This is certainly a very valuable publication, containing 322 pages, packed full of good, up-to-date, poultry literature, and we would advise all poultry people to write to the Kansas Board of Agriculture and procure a copy.

SCALDING POULTRY.

When scalding poultry for market, first dry-pick legs, so they will not be placed in water and change color. Neither heads nor feet should touch water. Water ought to be near the boiling point as possible without boiling.

To plump a dressed fowl dip it ten seconds in water nearly boiling, and then immediately in cold water. Hang in cool place until animal heat is entirely out. Plumping gives a much more attractive appearance.

HOGS

WET OR DRY FEED FOR HOGS. WHICH SHALL IT BE?

As a rule the old-timers champion the slop bucket, while more and more we find that younger men are satisfied with the results obtained from feeding a dry mixture to growing pigs. It is claimed that by feeding dry you will do away with the pot-bellied appearance of the growing pig, and of course it materially cuts down the labor item.

The fact that good results are obtained by both methods when plenty of common sense is used simply indicates that the pig's digestive system is adaptable to a variety of conditions. We do not take our stand in favor of or against either method, but in practice find that the best results are obtained by feeding both slop and dry feed. Take a bunch of pigs three or four months old that are running on grass, and if you want to bring them to a good weight at an early age you will find it to your advantage to use dry feed and slop. Whether it is best or not we can not say, but we have always believed in giving the growing pig just about all the thick slop he cared to take early in the morning. When we say thick slop we mean slop that will pour out of a pail, but a little reluctantly—about as thick as heavy molasses late in the fall. After this meal pigs generally lie around for two or three hours and they are then ready to spend the balance of the day in the pasture. They come up at night looking full, but there is still room for more, a fact that may be attested readily when they hear the rattle of the pail or the ding of the scoop shovel. This is the time when we think dry feed is desirable. According to this plan the pigs therefore get one meal of slop and one meal of dry feed, and if they are healthy they ought to grow to the constant delight of the owner.

We take it for granted that every man who reads this article has his own way of making slop, and its make-up will depend upon prices of the various feed stuffs. Corn meal and tankage, in the proportion of eleven or twelve of the first to one of the latter, will always contribute to rapid gains, while seven or eight parts corn to one part oil meal makes an exceptionally nice, "slick" slop to feed. Shorts, bran and corn meal in equal parts make a good ration, and while there are those who do not like bran, we have found that it gives good results in this respect, that the pigs eat it more slowly than they do other feeds, and this possibly leads to a more perfect mastication and digestion. Of course the mill feed alone answers every purpose, but it is rather more expensive than corn, even though corn is now high in price. Twelve hours' soaking is generally long enough and the barrel should be emptied out clean each time so as to prevent fermentation.

JERSEY RED PIGS FOR SALE

"Meal Time"

REDUCTION IN PRICES

To quickly reduce a large stock on hand I am offering my Famous Jersey Red Pigs at the following SPECIAL PRICES, until Nov. 25th. After that date catalogue prices will absolutely prevail:

2 pigs, 8-10 weeks.....	\$10.00.....	regular price \$12.00
3 pigs, 8-10 weeks.....	12.00.....	regular price 17.00
6 pigs, 8-10 weeks.....	30.00.....	regular price 35.00
1 Sow Bred, 6 mos.....	18.00.....	regular price 20.00

Quick action will save you money. Write me your wants today. A guarantee of safe arrival goes with every animal shipped, and my reputation is back of every transaction. These celebrated Jersey Reds are growing favorites—small-boned, vigorous, prolific, easy to raise. Jersey Reds are money makers.

Write today for catalogue which tells all about my Jersey Reds.
ARTHUR J. COLLINS, Box B. S., Moorestown, N. J.

Separator Milk Best for Hogs.

Feed is the chief expense in raising hogs for the meat market, and the man that can produce the greatest amount of weight at the least expense for feed is the one that will make the greatest profit and the biggest success in hog raising.

The dairyman has a feed in his milk bi-product that can not be excelled, taking into consideration its cost and a good crop of pigs is always possible where there is a supply of separator milk.

The dairyman's business is making butter from the butter fat in his milk. He has two objects in view, to get all the butter fat out of the milk, and how to use the milk from which this butter fat has been separated to produce the best results in profit. Experience shows that the greatest profit comes from separated milk when fed to pigs.

Milk is a natural food. It is a complete food. It is a thoroughly balanced food in supplying growth, especially to young pigs. The nearer it is fed to its natural condition the better feed it makes for the pigs. But the dairyman is in business to make a profit and he must take all the butter fat out of it, that the best separator will do.

Nature does not supply sour milk, or curdled milk, or fermented milk, only the sweet, pure article. If it needed acids for best results it would have been given them by nature.

This is where the separator comes in, for it takes the butter-fat out of it while the milk is sweet and fresh from the cow, and enables it to be fed in that condition.

To secure the best results oil cake meal should be added to the milk before feeding, so as to supply an oil substitute for the butter fat, at a cost of less than two cents a pound to replace that which is worth generally about thirty cents a pound.

This makes a splendid substitute for the natural, full milk. Of course, it can be fed without the oil cake

meal, by mixing either shorts or a combination of some of these, and fed to excellent advantage. The fact is that, while the separator milk thus sweet from the cow is of the very best character as a feed, the corn meal and the milk combined make a better feed than either one separately and when a little oil cake meal is also added, it makes a feed that cannot be surpassed.

In alfalfa regions brood sows are fed exclusively on alfalfa hay in winter and alfalfa pasture in summer time. Very little grain, or none whatever, is fed. As a result the sows are always strong, vigorous and healthy.



G. M. DITTO, BOX 118 JOLIET, ILLINOIS



SICK HOGS Cured and disease prevented with Snoddy's Powder. Cures hogs of worms. What good man, treat sick hogs, and guarantee a cure. Treatment is simple, easy, new use. Used and endorsed by leading breeders everywhere. Makes hogs thrive in a few days. \$5 case cures 50 hogs. Write for look on hogs, also reports of public tests, sent free. Agents wanted. Dr. D. C. SNODDY CO., Box T, Nashville Tenn.

CATARRH Instant Relief and positive cure. Trial treatment mailed free. Toxic Laboratory, 1123 Broadway, New York.

HOG CHOLERA

The Hog Worm is the Most Dangerous Foe of the Hog

In almost every outbreak of cholera you will find hogs very wormy. They get a hog out of condition and unthrifty. Then it is an easy prey to disease. The Snoddy Remedy will destroy every character of a hog worm. Even the liver and lung worms, which are the most dangerous, are easily destroyed with the Snoddy Remedy. Ten cents worth of the Snoddy Remedy will clear out the worms and purify the blood of a hundred pound shoat, so that he will be worth one dollar or more in a few weeks than he would have gained without this remedy. Can't you afford to invest ten cents per head to make your shoats worth a dollar per head more than they will without this little investment. Then why waste time and feed on wormy, runty hogs when it is easy to have them thrifty.

It also prevents and cures Hog Cholera. Any practical farmer can stop the worst outbreak of cholera that ever came with it and restore his herd to thrift in a few days' time. It is used and endorsed by the leading hog raisers of the country. Snoddy's free book on the care and management of hogs, so as to keep them thrifty and clear of cholera or worms, will be sent to you free, by return mail, if you send your name and address to

THE SNODDY REMEDY CO., Box 290, ALTON, ILL.

What the Different Breeds Weigh Up in Hams and Shoulders.

Berkshire, hams, twenty-three and one-half pounds; Duroc-Jersey, twenty-four and one-half pounds; Poland-Chinas, twenty-five and one-half pounds. These hogs in size were practically the same weight.

The shoulders of the Berkshires weighed twenty-one and one-half pounds; Duroc-Jerseys, nineteen and one-half pounds, and Poland-Chinas, nineteen and one-half pounds. The Berkshires have larger shoulders than the other breeds.

These figures are from an actual test made for this purpose and the butcher who saw the hogs slaughtered thought the Duroc-Jersey had the most fat on the back; the Poland-China next, then the Berkshire. The Berkshire ham showed more lean and less fat than the Poland-China. The butchers considered the breed of hogs that had the most fat the most profitable both for the farmer and the butcher.

We would be glad to know how Chester Whites and Jersey Reds would have shown up in such a contest.

CURING PORK.

One of the Very Best Recipes We Know of.

For 100 pounds of pork use 10 pounds salt, 2 ounces soda, 5 pounds of brown sugar, 1 ounce saltpetre, 4 gallons soft water.

Take part of the sugar and salt, mixed, and rub thoroughly on the flesh side of each piece. Boil the rest of the salt and sugar together with the other ingredients, skim and cool. Then pour over the pork, which has been laid, skin side down, in an oak barrel, with one inch of salt at the bottom. Ashton salt makes by far the best brine, and if you cannot get good brown sugar, use five pints of New Orleans molasses. Place a weight on top to keep the pork under the brine. I use a stone.

Large hams and shoulders are better if left in the brine from six to eight weeks, while bacon will be ready for smoking in 3 weeks.

After removing from the barrel let the pork drain for two days, then

smoke, using corn cobs, green hickory, apple or maple wood, and be careful to have plenty of smoke but not enough fire to make heat. Smoke a few days then skip a few days, until four weeks have gone. Sprinkle with black pepper, wrap in paper, and sew in a cotton bag, whitewash and hang in a cool, dry place. Do not use a whiskey barrel, as it will spoil the flavor. A molasses barrel is best.

Sweet Milk for Pigs.

A subscriber asks if he can feed his three-months-old pigs too much sweet milk. He mixes a little shorts with the milk.

Nature has provided the hog with an instinct to eat no more than is good for him, and there is no better feed for young pigs than sweet milk. For a week or ten days after weaning some breeders feed the milk without separating the cream. There are breeders who prefer to have the milk sour, and even loppered, before feeding to their month-old pigs.

Let's have your experience for the benefit of all.

Deficient Boars.

A breeder wants to know if a boar that has been deprived of one testicle by disease, accident or otherwise, can continue to breed and produce a litter? This is a case that does not happen often, but it is a known fact that boars with single testicles have actually sired litters of pigs that would compare favorably with others. It is a part of the wisdom of Nature, to protect the procreative capacity of the animal by making assurance doubly sure, in the event of an accidental injury.

Best Plan of Weaning Pigs.

It's a good plan to allow some of the pigs to remain on the sow, especially if she is a heavy milker, as it will be better to dry her up gradually than to take the pigs all away at a time. This will eliminate all danger of caked udder and she will be more apt to prove a good milker for her next litter. Many good sows have been injured by weaning the pigs too soon or by only having three or four at a litter.

Sunshine and Exercise for Little Pigs.

Don't let the little ones lie in their beds without stirring around, or the first thing you will be aware of the fattest and plumpest will have the thumps. Be careful that they are not situated so as a draft will blow upon them and chill them or cause them to take cold, as usually pneumonia follows. They need exercise and sunshine as well as their mother does.

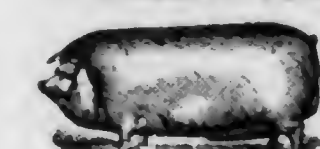
Prevention of Disease.

Plenty of sunshine, plenty of range, abundance of succulent food in addition to the grain food will produce and maintain a normal, healthy condition. For best results the ration should be balanced. All corn ration is not productive of best results.

FARMERS

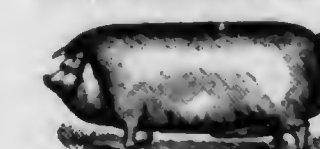
Send 50c in stamps for 6 months' subscription for the Horse News and Speed Bulletin. Finely illustrated paper. And receive three valuable formulas free—Bone Spavin Cure, Heave Cure and a good Hair Grower—all genuine. Address P. J. WYAND, Cumberland, Md.

GREENWOOD STOCK FARMS



Farmers and Breeders I now have a large stock, probably the best I ever owned, thoroughbred Poland-China and ChesterWhite Pigs, 2 to 6 mos. old, sows bred and boars ready for service, all from prize winning stock. Guernsey and Jersey Cattle, Buff and Barred Plymouth R. Chickens. Farms and Residence, Greenwood, Pa. Address C. H. DILDINE, Route No. 1, Rohrsburg, Pa.

BARGAINS IN POLAND-CHINAS, BERKSHIRES and CHESTER WHITES



I now have a large stock of probably the best I ever owned. Cannot tell you all here, but I have Boars and Sows, all breeds, 2 to 6 months old mated not akin; sows bred and boars ready for service. Guernsey Calves and Registered Scotch Collie Puppies. Write for prices and free circular. This stock must go and will be sold. M. B. Turkeys, Barred and White P. Rocks, B. Leghorns and Beagle Dogs. P. F. HAMILTON, Cochranville, Pa.

PURE BRED STOCK

SELECTING THE HERD BULL.

It has long been an axiom of the breeder that the sire is half the herd, and it is generally accepted as a fit expression of an important rule.

The skillful breeder of any kind of stock does not need to have it pointed out to him how important it is that the sire be properly selected. If he is a skillful breeder, it is largely because he realizes the importance of the sire and knows how to select him. While the skillful breeder realizes the importance of this in breeding, the average dairyman does not give the question of the selection of the sire one-tenth the attention the importance of the question demands.

Thousands of men make use of a scrub or grade sire on account of mistaken economy in cost rather than pay a few dollars more for an animal that is almost certain to transmit desirable qualities. It is not surprising that we have so many worthless cows. They come by their worthlessness in the majority of cases from sires worse than worthless. Some of these scrub bulls are registered in the herd book.

The selection of a herd bull is a very serious matter for the man who is trying to build up his herd, and the higher developed they are in the way of dairy production the more serious is the problem. One of the chief difficulties is that practically nothing can be predicted from the looks of the animal, if he has the inherent characteristics of transmitting good dairy qualities or not.—Prof. C. H. Eckles.

A REAL BRAN MASH.

It is only in racing stables and large studs, as a rule, that one sees a bran mash made properly. First wash out a bucket with boiling water, then pour in the quantity of water required, say three pints, and stir in three pounds of bran. Cover up and leave it for a couple of hours or more if not required for immediate use. A mash takes hours to get cold and is often given to a sick horse too hot and refused when it would have been taken if properly prepared and given warm instead of scalding hot. The addition of a tablespoonful of salt in the ordinary mash of a Saturday night can be recommended to keep down parasites and promote digestion, but should not be a part of the sick horse's diet unless specially ordered. A mixture of linseed and bran is often prescribed both as food and a poultice. To one part of linseed, two of bran is a desirable proportion for both purposes. To get all the feeding value out of linseed, several hours should be allowed for cooking, not merely infusing, as with a bran mash, but gently simmering on the side of the stove. The vessels should be filled and towards the end the lid may be taken off and evaporation permitted while cooking.

ALWAYS BE ON YOUR GUARD WITH A BULL.

The docile, "gentle as a kitten" bull is the one that either provides a job for the undertaker or renders his victim a cripple for life, and the chances are that this same bull was a pet when a calf. That familiarity breeds contempt is as true of animals as of men, and that bull never yet existed that could be trusted—sooner or later their vicious temper will assert itself to the utter disregard of those within reach. The training of the bull should be begun with early calfhood and never relaxed, and should be with the direct purpose to impress subjection—kindly but firmly—and persistently impress the knowledge that you are master and that it must yield obedience to proper restraint. If the children are allowed to play with the bull calf it will imbibe notions of liberty that can never be eradicated and will afterward prove both troublesome and dangerous. It is well within the facts to say that the bull is always dangerous and never more so than when treated and trusted as a harmless animal.

DEARTH OF YOUNG BREEDERS

Why are there no more new men engaging in the business of raising at least a few pure bred hogs. Some men will tell you that the ranks of the breeders are already overcrowded but such is far from being the case. It may be true that there are too many people raising hogs that should not be termed breeders, and whose hogs are kept in such bad shape that they cause many people to lose their faith in pedigreed animals. On the other hand the business is not crowded with breeders who raise the best kind of hogs, and there is plenty of room for young men who will enter the business in an intelligent manner, and who will devote time and attention to doing the very best that they can.

We suggest that young men take up this work because the breeding of any kind of live stock is properly the work of a life time and not of a single season or even of a few years. A man who buys a pedigreed sow and offers her progeny for sale is not necessarily a breeder. In the hands of such a man the hogs often deteriorate and gradually revert to the level of grades.

The real breeder is the man who studies carefully the breeding stock in his herd, becomes thoroughly familiar with the demands of the buying public and aims to produce each year at least a few animals that are better than any of those he raised the previous year. The subject of hog breeding is one worthy of a volume rather than of any single article and yet the present is a favorable time to mention a few of the main points in such a business.

One of the fundamental requirements for a breeder is the spirit of persistency. Failures in this line can generally be traced to a man who bought his first pure bred stock only when tempted to do so by the prevailing high prices, and who then became disgusted and sold out the very first time that a depression in values

BLOODED STOCK for November.

occurred. Such men can be found in every line of business and must be classed as speculators rather than breeders. The hog breeding business has probably been affected with more men of this class than any other branch of the live stock industry because the hog is such a prolific animal that a herd can be built up in a year or two and, excepting in case of disease, the returns are the surest. This latter condition is due to the fact that pure bred hogs do not eat any more than grades and in most seasons will bring enough on the open market to pay the actual cost of care and feed.

FOR SALE OR EXCHANGE.

Only Two Cents a Word.

All classified. Each initial or number counted as one word. No advertisement taken for less than 25 cents each issue. All replies must be sent direct to advertisers. Cash covering the exact number of words at 2 cents each must be sent with every order. This Department for Live Stock Only.

MISCELLANEOUS.

HORSES going blind Barry Co., Iowa City, Ia., can cure.

FOR SALE—Very handsome trotting mare, in foal to Perry K. 213, \$100. P. J. WYAND, Cumberland, Md.

CATTLE.

PURE-BRED Registered Holstein bull calf. Dam's record 15.34 lbs. MADISON COOPER, 101 Court, Watertown, N. Y.

PURE-BRED Holstein Bull Calf. Eligible for registration. Also high-grade bull calf. MADISON COOPER, 101 Court, Watertown, N. Y.

HOGS.

FOR SALE—Duroc and Poland China Registered stock bred sows. Service Boars \$13 to \$20. 40-lb. Pigs \$5. Also some choice Rhode Island Red chickens. WM. HARTSHMAN, Thurmont, Md.

FOR SALE—Some fine Yorkshire Pigs—no better stock in U. S. Just imported—new blood. A. A. BRADLEY, Frewsbury, N. Y.

HOTEL BAYARD

142 144-146 West 49th St.
New York

Transient and Family Hotel, Fire-proof, 200 Rooms; 100 Baths; a well kept Hotel, quiet, yet close to Broadway.

Six surface car lines within two minutes walk. Subway and Elevated Railway stations, one block away.

Convenient to Everything.
Best Room Values in New York

Single rooms, free baths,
\$1.00 and \$1.50
Rooms with bath, \$2.00 and upward
Parlor, bedroom and bath,
\$3.50 and upward

M. F. MEEHAN
Proprietor.

BLOODED STOCK for November.

FARM BEAUTIFUL

To have well arranged and comfortable cattle barns, stables and other outbuildings is commendable, but we owe something to our families and to ourselves.

We are born, grow up and die on the farm. No place sees more of us, and no place should be more cosy or beautiful, and no place should be more convenient.

After the corn is husked, the stalks drawn in, the threshing done, and things generally put into ship shape for the winter, let us look around and see what can be done toward making things more convenient for ourselves, and more attractive to others.

Generally thought and work only are necessary.

Trimming up the shade trees would help many a place. Setting out a few additional trees here and there, on some definite plan, would be a good idea for others.

A new driveway, or a different turn in the old one might be an improvement.

A cement walk would be such a convenience, and looks so much more thrifty than the old boards, which half the time fail in their purpose.

And what a difference a little paint makes, and it doesn't cost so very much either.

Possibly your wife has to rush out every few minutes during the day for a pail of water. Isn't it possible for you to have a force pump in the kitchen?

While you are at it carry a pipe up stairs to a tank, and enjoy the luxury of a bath. Oh, it's so convenient and so healthful! If you cannot afford a metal tank, use a large barrel. The expense for both pipes, pump and all will not be so very great, not nearly so much as the increased value of your property.

Fix things up in the cellar. May be you float around after every extra heavy rain storm, and literally swim when the spring thaws set in. A bag of cement might fix it all, and you'd save it in doctors' bills or medicines. A shelf here and there would make things handier and would please your wife so much.

These are only suggestions, but now that you think of it, there are lots of things you might fix up a bit.

Let your fellow readers know what you do. It may help many of them, and it certainly will help the editor.

CEMENT WALKS.

Cement walks, built by your own hands three years ago, long enough to know how they are going to behave, are still giving the very best satisfaction, and this is how we went about making them:

We first excavated to a depth of six inches, and three feet in width. Into this excavation we hauled wagon load after wagon load of small stones picked up from our fields, and filled into this excavation until it was flush with the surface. We then laid along each side of this excavation a course of two by four planks to form a mould for the walks, making each walk thirty-two inches in width when

finished. Into this mould and over the stone we poured a thin grouting of slush cement and sand. Then top dressed the entire surface two inches in depth with thickly stirred concrete, formed from good cement one part, sand two parts and crushed stone three parts.

With a plastering trowel we trowelled and smoothed the surface several times over until it was thoroughly smoothed and set.

The more travelling done the better the job. When the concrete was well formed and set we removed the planks from the edges and used them in other walks. While the cement was still soft we marked the walk off into sections of three feet each, and in drying it cracks down through, so that when heaved by the frosts only one section will rise up and the walk will not become cracked except at these joints where you want it to separate.

We have porch floors built in the same manner which are doing excellent service.

PAINT NOT ONLY PRESERVES BUT IT BEAUTIFIES AND ADDS VALUE.

Painting the buildings, both the home buildings and barns, and the churches and school-houses as well—every farmer should resolve upon this as one of his tasks after the crops are laid by. Consciously or unconsciously the neatly painted home will make its every occupant happier and brighter. Paint pays in money, in beauty and in good cheer.

The farmers in the East do not seem to appreciate the real value of paint. It adds considerably more to the buildings, implements, etc., than the cost of the painting, as you will find some day should you decide to offer the farm for sale. And its worth even more to yourself as a home. Buildings kept properly painted have an age of from fifty to one hundred per cent greater than those which are not kept painted, and in these days of expensive building material it behooves us to take care of our buildings.

And then well painted buildings give us an air of prosperity and distinction that makes life better worth the living. You will generally find that the farmer whose home and buildings are well painted, is the farmer who is "doing things" in his locality.

White-wash looks fresh and clean, if applied each year, but when you

figure up everything on both sides you will find paint is just as economical as far as cost goes, and white-wash is not especially a preservative.

A new kind of pavement has been discovered. In an editorial addressed to the Commoun Council a newspaper exposes the secret: "Put your heads together, Aldermen, and the street will be well paved."

KEEP THE BARNYARD IN SHAPE.

There is nothing so repulsive as a wet and filthy barnyard, in which the animals are compelled to walk knee deep in filth. Such a condition is not necessary and can be prevented if the barnyard is kept well supplied with absorbent material. Throwing whole cornstalks into the barnyard is the old method, but cornstalks do not absorb until they are trampled to pieces and in the meantime much of the liquid is carried off by the rains. It will pay to shred the corn stalks or cut the straw for bedding, while leaves and dry earth may also be used in the barnyard with advantage.

THE TOOLHOUSE.

No building on the farm pays better than a good toolhouse. It should be so convenient of access that there need be no excuse for leaving farm implements exposed to the weather when not in use. Properly cared for, many implements that now last only a few years ought to be serviceable as long as the farmer lives to need them. Besides, a tool that has not rusted, warped and cracked by exposure, will work as well the second and third year of its use as the first. On many farms the tools are so much injured by being left out of doors that after the first season they cost more for repair than they save in labor. It's certainly not adding to the attractiveness of the farm to leave the tools around.

THE MONEY-SAVING FENCE

Is the one which, bought at the right price, gives you the best service, lasts the longest, causes you no trouble.

NATIONAL FIELD AND HOG FENCE

Is just that kind. Made of heavy, single wire, an incomparable close mesh, as strong as a stone wall. Don't buy a fence until you have written us about this and our Ranger Barb Wire—a heavy, single wire with rotary barb. Tell us what you require and we will name you delivered price.

DeKALB FENCE CO. DeKalb, Ill. Kansas City, Mo.

CLARK'S REVERSIBLE DISK PLOW

CUTAWAY SULKY The Only Perfect Reversible Sulky Disk Plow Made.

Is controlled at the end of the furrow by a foot trip lever which releases the Turning Disk, so that when the horses are brought in good position to continue plowing it inter-locks itself, without any further use of levers or efforts of the driver. Can be used as a right or left hand plow and is a perfect success. Is mounted on carrying wheels and is as light as is consistent with durability. The best results are obtained in plowing fallow land for the Cutaway Disk Plow shake out the edge of the furrow so that it isn't necessary to harrow the land after once ploughed with this plow.

Send today for FREE Booklet with full information.

CUTAWAY HARROW COMPANY, 806 Main St., HIGGANUM, CONN.



A THANKSGIVING HYMN.

Another year with bounty crowned
Has rolled from out Thy hand;
Another year with blessings rich
Our lives has gently spanned.

Another year of peace has blessed
Our free and happy land,
And plenty dwells in all our homes
By Thy divine command.

And now as round the cheerful board
We gladly join once more,
With dear ones gathered from afar,
To count Thy goodness o'er.

Let all our hearts with thanks be filled
Unto our father's God—
For Mercy, Love and Peace which He
Hath scattered far abroad.

And let the beauty of the Lord
In every mind be found,
Until the country of our choice
With wisdom shall abound.
—Selected.

Home Beautiful

THANKSGIVING.

We, in America, cannot realize how much we have to be thankful for until we actually come into personal contact with conditions in some of the countries where life is a ceaseless struggle from one year's end until the other.

Of course it's a fact that the world over advance and progress have been made, and yet the strides in our own land have been so much greater, so much more pronounced, so wonderful.

Problems that have been threshed out by the older nations have not yet come to us. They have been kept in abeyance by the tremendous national resources of the New World. But it's unfair to think life will always be for us one grand, sweet song. We, too, are getting along in years, and there are questions facing us, questions that will not always be delayed, that will take all the thought and ingenuity of our most masterly minds to solve.

While we have peace, and quiet, and rest, let's grow strong, strong in judgment, strong in determination to do right, and great in heart, to humanely do our part.

Let us remember this Thanksgiving Day there are so many greater things to be thankful for than mere prosperity, and let us not be ashamed to remember to whom we owe our thanks, and to pour them out to Him, not only in private, but in public, every time the church bell calls us to worship. On November twenty-sixth fill His house and lift your voices and hearts too

"My God, I thank thee who hast made
The earth so bright;
So full of splendour and of joy,
Beauty and light:
So many glorious things are here,
Noble and right.

GETTING READY FOR THANKSGIVING.

Of course the centre of interest on Thanksgiving Day is the dinner table, and its pleasures may be greatly increased by giving it a really festive appearance. If "mother" is too much occupied with baking and seeing that the "good things" are all at their very best, to attend to the table decorations, then let some other member of the household take this especial task in hand.

There are various ways of decorating the table, of course, but in the country there is a wealth of the very best material at hand. For the center piece use a pumpkin, of a size corresponding with the size of the table. After choosing the pumpkin, cut off the top, leaving a handle in basket fashion, or carve a rounded handle upon each side, as preferred. Scoop out the inside of the pumpkin, and use it as a receptacle for fruits, piling them high within, and letting grapes or similar fruits droop over the sides.

Scatter over the cloth, here and there, colored autumn leaves which have been previously gathered and pressed flat with a waxed iron. These add a touch of bright color which should not be overlooked.

If the pumpkin centerpiece is not to be obtained, fashion a cornucopia from stiff cardboard, make it of generous size and cover with yellow crinkled tissue paper. Lay it on its side in the center of the table and fill with fruit so that the latter overflows upon the cloth. This can be made to give the table a very attractive appearance.

Slice carrots or parsnips lengthwise, making a long narrow "dish," which should be hollowed out to hold the salad, and if necessary a slice should be cut from the bottom to make them stand steadily. Round, white turnips can be used in the same way to form dishes of a round shape, while tomatoes, if they can be obtained fresh, also make most attractive receptacles for salad.

No better holders for nuts, candies and raisins can be secured than gourds of fanciful shapes. These can be cut, painted, burned and carved to suit the fancy, but a good assortment of gourds really needs no decoration to make them attractive, they come in so many shapes and colors. Some look like oranges, others like miniature pumpkins, while others resemble immense spoons with curved handles. When cut and the contents removed they are as hard and durable as a real dish, and quite as serviceable.

Another really artistic decoration for the table consists of ears of corn, the husks of which are dried and turned back, showing about half of the corn. There may be both red and yellow ears, laid here and there, according to the setting of the table.

To those who live in the country, some of these decorations may seem very commonplace, but they can be made to give a table a really artistic appearance, and their true beauty should not be overlooked because they are so readily obtained.

When boiling cabbage or cauliflower a cup of vinegar placed anywhere on the stove will absorb the odor.

BLOODED STOCK for November.

A "COMFORTABLE" THANKSGIVING DINNER.

Oyster Stew	Celery	Crackers
Roast Turkey	Mashed Potatoes	
Scalloped Onions	Creamed Squash	
	Cranberries	
	Bread and Butter	
	Apple Nut Salad	
Pumpkin Pie or Pear Bread Pudding		
Nuts, Fruit and Raisins		
Tea	Coffee	

HOW TO COOK IT

Oyster Stew. Watch the oysters closely, and the moment the edges start to curl they are cooked.

Turkey. In our judgment the best flavor of the turkey can be maintained only by using for the stuffing, stale, dry bread crumbs. Do not add milk. Cover the wings and legs completely with thin strips of good, salt pork. A couple of pieces on the breast bone save so much basting and improve flavor. Pork should be removed twenty minutes before taking turkey from oven, to brown.

Scalloped Onions. Boil till tender six large onions, take them up, drain and separate them, put a layer of bread or biscuit crumbs in a pudding dish, then a layer of onions, alternately until the dish is full, season with pepper and salt, add a little butter, moisten with milk and brown half an hour in the oven.

Creamed Squash. Cut a small piece from the large end of the squash, remove seeds, and place hole side down, in a pot same size round as the squash, so that the steam will all go up into the squash. Steam one hour then scrape out all the edible part, add butter, pepper and salt and beat to a creamy consistency. Serve in a hot, covered dish.

Apple Nut Salad. One cup walnut meat, one cup finely chopped celery, two cups crisp apples, peeled and cut into small cubes. Serve on lettuce or celery leaves, with the following dressing:

Salad Dressing. Yolks of four eggs, two-thirds cup vinegar, one-third cup water, one teaspoon mustard, one teaspoon salt, two tablespoons sugar, pinch red pepper, butter the size of a walnut. Cook in a double boiler until thickens, then cool and add half cup sour cream.

Pear Bread Pudding. Slice and stew the pears in a syrup made with a pint each of sugar and water, adding the juice of a lemon, then place half of this in a pudding dish. Have ready a pint of bread crumbs mixed with a tablespoon of butter, half a cup of sugar, a cup of warm water, and, lastly, the whipped whites of two eggs. Place this on the pears in the dish, pouring over the top the rest of the fruit. Grate a little nutmeg over this; sprinkle a tablespoonful of crumbs on top with a little sugar and bake covered an hour and a quarter. Remove cover and brown the last few minutes. Serve with a sweet or tart sauce as preferred.

Delicious Date Cake. One cup of butter, two cups of white sugar, one cup of sweet milk, four eggs, two and

BLOODED STOCK for November.

a half cups of flour, one and a half teaspoons of baking powder, one pound of seeded raisins chopped, one pound of dates chopped, half pound of almonds, quarter pound of citron peel. Bake in slow oven about two hours.

White Cake. Two cups sugar and one cup butter creamed together, one cup sweet milk, four cups flour, to which has been added two teaspoons baking powder, well beaten whites of five eggs; flavor as desired. Bake one hour in a slow oven.

Dutchmen. Cream one cup of butter with two cups of sugar, add one cup of sour cream, one of sweet milk and flour enough to make a soft dough sifted with one teaspoon each of salt and soda. Roll one-fourth of an inch thick, sprinkle liberally with cinnamon and roll up like a jelly cake, slice off and bake in pans like cookies. Serve with coffee for breakfast.

Dutchess County Cup Cake. Cream one and a half cups of sugar with a half cup of butter. Add two yolks of eggs and nearly a cup of milk. Sift in two cups of flour and two teaspoonfuls of baking powder. Add the beaten whites of two eggs and bake in cups or muffin tins. These little cakes are exceedingly delicate.

Corn Muffins. One pint of cornmeal, one pint flour, one tablespoon sugar, one teaspoon salt, two teaspoons baking powder, one tablespoon butter, two eggs, one pint milk; sift together cornmeal, flour, sugar, salt and powder; rub in the shortening, add eggs beaten and milk; mix into batter of consistency of cup cakes; muffin pans to be cold and well greased; then fill two-thirds. Bake in hot oven fifteen minutes.

Mountain Muffins. Pour one and one-quarter cups of scalding milk on one cup of white cornmeal; cover; let stand ten minutes; add one cup cold boiled rice; mix; add one cup flour mixed with three teaspoons baking powder, two tablespoons sugar, one teaspoon salt, two well-beaten eggs, two tablespoons melted butter; beat hard. Bake in greased muffin pans in hot oven.

Pumpkin Patties.—These patties make take the place of the Thanksgiving pumpkin pies. To one pint of stewed and sifted pumpkin add one saltspoonful of salt, one pint of rich milk, three eggs well beaten, one-half teaspoonful each of cinnamon and mace, one of ginger, and one-half cupful of sugar. Beat thoroughly together, and pour into patty pans which have been lined with good pastry.

Cleaning Silk Fabrics.

Silk of any kind or color may be cleaned in the following manner: For every quart of water to be used in washing a dress, pare and grate one large potato. Put the grated potato into the water, which must be cold and soft; let stand two days without being disturbed in any way, then very carefully pour off the clear liquid from the sediment into a large, convenient vessel, into which dip the pieces of silk up and down.

To keep juice in a pie take a narrow strip of white cloth long enough to lap, wring out of hot water, double lengthwise and pin tight around edge of plate,

Fruits and Vegetables

THE OLD ORCHARDS.

It's a sin and a shame to allow the grand old apple trees planted by our fathers, and grandfathers, to rot and die off one by one.

Many of us either don't appreciate their value, or the time it takes to get a tree safely to the good bearing stage.

Farmers living near cities or towns, who hope and expect to sell at a good price to some city man, will find that a place with even a few fruit trees will prove more attractive.

You may not appreciate the privilege of growing your own apples, and pears, and plums and cherries, but the city man, whose only supply is the fruit store, where he pays so much a piece, does, and he is going back to the farm by thousands every year.

Many of the model fruit farms, as well as live stock and dairying, are owned and run by city men, and often, it seems to the city farmer for the impetus he has given to agriculture throughout the East more especially.

Get busy with your old friends, the apple trees. Carefully scrape off the roughest bark that is only a hiding place for destructive and pestiferous insect life. Be careful not to scrape too deep—the green must not show. Just smooth up the trunks and main boughs. It's easier to do this after a rain.

Then, after a while, cut out all the suckers that have sprung up around the roots, and all the little, young twig-like growth springing out of the main branches. Cut out all dead wood you can distinguish, though this will be easier when the leaves come again. Go slowly about trimming out the larger limbs. Better to spread your complete pruning over a couple of seasons, so that there will be no danger of destroying the tree's activity and life.

The next step is to spray them thoroughly to kill the scale. Use a solution of lime and sulphur. A good mixture is Lion Brand, made by Blanchard & Co., New York. Or, if you prefer it, "Scalecide," an oil spray made by Pratt Co., New York. Get it on while the leaves are off and cover every point. The sooner the better now for spraying, but not on a freezing day.

In the spring, as the snow melts away, give these old fellows a thorough dose of manure, out as far as the branches reach. They have needed it for a long time.

Care and watchfulness will bring the old trees back to healthy bearing again, and you will not only be well paid financially, but proud at heart that you had sense and humanity enough to at last clear up the orchard.

PRICE OF NURSERY STOCK.

It is reported that J. H. Hale, the Peach King, has said the curse of the fruit industry in this country has been the demand for cheap fruit trees. He

made the point that by continually demanding that the price of trees be lowered the growers had at the same time secured a lowering of quality, until many of the trees planted in orchards are hardly worth the ground they occupy.

Whether this be true or not certain it is that no one can expect to buy as good trees now for the same money which was paid a few years ago. Prices of land and of labor have advanced until it costs much more now to produce trees than it did a few years ago, even were there no diseases to be contended with. When a nurseryman has to throw out a lot of trees which may be affected with crown gall—and all nurserymen have to do this—it increases the cost of good trees still more. Fruit-tree buyers, therefore, may make up their minds they must pay for good stock, for the production of trees, like production of everything else, has increased within the last few years.

WHERE OUR VEGETABLES ORIGINATED.

In 1585 the potato was introduced into Europe by the Spaniards, who found it in Chile. At almost the same time it was introduced into England by the English, who had found it cultivated by the Indians in North America. The sweet potato and the artichoke are also American vegetables. Salsify is found growing wild over Greece, Italy and Algeria. Turnips and radishes came originally from Central Europe. Cabbage, which is of remote origin, is believed to be a European vegetable. Asparagus found its origin in temperate Western Asia. Eggplant came to us from India. The carrot grows wild throughout Europe, Asia Minor, Siberia, China, Abyssinia, Northern Africa and the Canary Islands. The tomato comes from Peru, the cucumber from India and the pumpkin from Quinea.

NOVEMBER REMINDERS.

Cut off the asparagus stalks and burn them, as asparagus sometimes becomes a weed from the seed dropping.

Give the bed a good, even dressing of old manure, about three or four inches deep, and it will take care of itself until spring.

Mulch the strawberry beds. Wheat straw, free from noxious weed seeds, is one of the best mulches as it does not pack too tightly. Leaves of trees lie too closely and are apt to smother the plants. Corn stalks are better than nothing, but are too coarse to afford protection and are a nuisance when cultivating the bed. Wait until the ground freezes, but not too long after cold weather sets in.

The timber output of Maine last year was 900,000,000 feet. At such a rate of destruction, the splendid forests of that State will very soon utterly disappear. Surely something should be done at once to save at least a portion of the forests of the country for future needs. Keep on planting trees. Every time you cut one down plant two.

ODDS AND ENDS ABOUT THE FARM.

November.

Gray Autumn, girded for the journey, stands

And looks o'er woods waiting for winter's snow.

Sere are the fields, and reaped the harvest lands;

Chill is the path her tired feet must go.

Her fire of smouldering leaves is almost done;

Its wavering smoke dies, pungent on the air;

Yet still she smiles—"My heart has known the sun

And the bright leaves upon these branches bare!"

—Priscilla Leonard.

Plan Things Out First.

No farmer should start out on any line of farm work without his bearings. He must have some definite object in view. If he plants a crop he ought to expect a certain yield under favorable conditions of the elements, and if he fails to attain the objective point, he should stop and find out why he made the failure. And so with stock raising. If he has a pig, let him expect a certain number of pounds in a given time; or if a colt or a calf, a development that satisfies his ambition. The idea is to strive to reach some point that satisfies the ambition. "So run that ye may obtain," say Paul, and again he says, "So fight I, not as one that beateth the air."

Don't do things in a pell-mell, helter-skelter way, but think. Think before you start, and think when you stop. Think, think. Use your mind first, and then your muscle."

This is good, solid, common sense, and the failure to look ahead and plan ahead is at the basis of seventy-five per cent. of the failures of farm life.

The less strenuous months are almost here; let's give a lot of time to thinking things out for next season. And the best way to begin is to quietly review the past few years. Sometimes it would be well to include our entire life. If we have been successful, there may be chances here and there for further improvement, and at least opportunities to set a neighbor right. If failure has been our only reward, let's find out why. If we cannot for ourselves, let us go manfully to our neighbor who does know and ask him to tell us what's the trouble.

The highest paid men in the great mercantile firms are those who do the thinking.

A good size jack knife is the best thing to cut hands at threshing time. Have it sharp and be careful not to let it slip into the cylinder.

Don't make the boys work too hard at threshing.

A PLEA FOR THE BOYS ON THE FARM.

"Your paper has a good deal to say about raising the colt, the calf, and the hog, but in my opinion it does not say enough about the farm boy. It seems to me that it ought to be a paper's opportunity to so direct parents in the training of their children and also encourage the young members of the family so that in the future a smaller proportion of our best young people would leave the farm."

"I have known instances where a boy would become dissatisfied with his lot on the farm at a very early age. He would envy the boy in the town who had so much time to spend in play, while he himself out in the country was obliged to spend his play hours in work. The important problem, therefore, is for the average parent to cultivate the habits of industry in their children without giving them a distaste for work, and especially for farm work."

"The writer well remembers how his early training was received. At the age of five or six he was assigned the task of keeping the wood-box full; it was his work to bring the cows night and morning and return them to the pasture; to keep a supply of kindling on hand—which, in wet weather, was the hardest job of all; to carry 'swill' away from the kitchen; spend some time in rocking the cradle, and of course we had to attend school. We were not consulted about where the school should be located, and as a result we received our education at the other end of a two-mile journey. I would like to see any town boy whose record would show up better than this, considered from the standpoint of things done. I do not deny that some of my tasks were imperfectly performed, but as the result of it I cultivated a like instead of a dislike for the farm. I presume my parents had the faculty of presenting work to me in such a way that it was performed in a spirit of fun, and I suppose that is the sum of the whole matter."

"I think in every way that a country boy has the advantage of the town boy if he only can be given a little latitude in doing the things he likes to do. It is nothing unusual to see a ten or twelve-year-old country boy harness and hitch up a big farm team, to a disk harrow or plow and do it just about as quickly as the boss himself. Imagine a town boy doing this! He would be afraid to go up beside a big horse and would crawl up over the manger, and in all likelihood it would result in both boy and horse being frightened nearly to death. It is because the little fellow gets the hang of things when he is young that he has such an advantage later in life over the lad who spends his youth in play. You may say it develops no special skill in a boy to learn how to bridle a big horse, but I contend that a ten or twelve-year-old boy that can put a bridle on a sixteen-hand horse must use his head as well as his hands, and this is why you so often find the farm boy with his head in the game."

"I will concede that the average farm boy's life could be made more enjoyable, while he would be no less useful, by a little advance thinking on the part of his parents. We have

Dairy Hints

To produce that high scoring butter—you must insist on cleanliness; the proper care of your herd; and that the cream be in the best possible condition.



Tubular Separators

will assist you in your enterprise because they are easy to clean, due to their simplicity; and they produce a rich velvety cream in an unwhipped and unchurned condition.

Their simplicity, durability, efficiency and originality of design are recognized everywhere, by everyone.

Catalog 300 describes them fully, sent free upon request.

THE SHARPLES SEPARATOR CO.,
West Chester, Penna.
Toronto, Can. San Francisco, Calif. Chicago, Ill.

seen many a lad toddle back for the cows through the cold dewy grass in his bare feet at five o'clock in the morning when there were idle horses standing in the stable that it would not hurt one whit to make the journey. What a change it would make in a boy's attitude toward this chore if he could get astride of a nice warm horse. He wouldn't have to warm his little feet on the spot where old boss had spent the night, and the whole task, both going and coming, would be made one of delight instead of drudgery. A parent is behind the times who thinks that the difficult way of doing things must be chosen for discipline's sake, because as a matter of fact the 'easy way' should be preferred always.

The farm boy's prospects have always been good, but they are better to-day than ever before. I mean that they are better in comparison with any other kind of a boy. Labor that was formerly performed by the human is now performed by the machine, and this is to the boy's advantage because it draws on his mental as well as his physical powers, and as a result he grows up a balanced man instead of a physical force only."

This is a healthy line of thought, and we are pleased to give space to any man who has the disposition and

Don't Saw off Horns
It's true. Any man can use Key-stone H. Shorner. It makes clean, smooth cut. No crushing or tearing. Done in a minute. Sold on money-back guarantee. Book free.
M.T. Phillips Box 21, Pomeroy, Pa.

the talent to encourage the boy out on the farm. While it is a very common thing to hear regret expressed on account of so many farm boys going to towns and cities, yet, on the other hand, there is a compensating factor because we cannot but think that the boy who is full of big, red, country corpuscles must raise the standard just a little higher wherever he goes. Many a boy, however, would receive a more liberal reward for his talent if he remained out under the big blue sky where he counts as an individual instead of becoming part of a machine in the populated centers.

We believe in lots of good healthy work for the boy, but there is such a thing as making work easy to take, and this should be studied by the parents. This little illustration given by this subscriber about allowing the boy to ride a horse for the cows on a cold morning goes directly to the point, and this same principle may be applied all along the line. A parent or a big brother can well afford to make it easy for the lad to get his kindling, and thoughtfulness toward the boy may be exercised in a thousand ways—ways that will build up a substantial character.

The city has attractions for all sorts of boys, but the fact that so many country-born men are never contented until they get back to God's blessed country, surely shows city life is not all it seems from the farm.

The struggle in the city is simply beyond all comprehension, and is second only to the fight to go on living a clean, respectable, God-fearing life. It's all very well for those who do not really know to say a young fellow need not come into touch with the evil side unless he wishes. You can't get away from it. It hems you in on every side, and at all times. The young man from the country or smaller place who comes through the ordeal with Purity's banner flying is a hero, equal to the greatest soldier that ever fought.

Keep your girls and boys away from the city. Don't forget discipline, of course, but be fair with the young people. You, too, were young once and had the same ideas and thoughts as they. Keep their respect and confidence and they will look to you for counsel. And if you love them, if you wish them to grow up sweet, pure, respectable men and women, let your advice be to stay on the farm. Make it attractive for them.

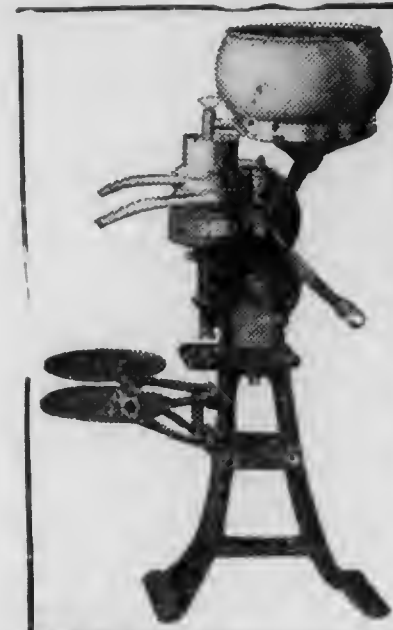
And remember they are worth more than any thing else on the farm; they are the greatest blessing you parents have, and they are entitled to a share of your cash—not when you leave them, but right now, as you go along.

Charcoal Your Cobs and Give the Hogs a Treat.

Lying around in the feeding lot there is generally a wasteful supply of corn-cobs left to rot in the dirt.

All good breeders and feeders will regularly rake up these cobs into a winnow, and when they are dry, dip a cob into kerosene in an old fruit can and light it with a match and it will set the bunch afire. This can be done three or four places in the winnow. After they are thoroughly

TIME TO BUY CREAM SEPARATORS NOW



There never was a better time to buy the best of Cream Separators than right now.

The advantages derived from the use of the good Cream Separator are greater in the fall and winter than at any other time,—when the cows are old in lactation, the loss of butter-fat is otherwise greatest, and butter prices are highest.

Likewise are the advantages of the superior DE LAVAL separators greatest over imitating separators when the milk is hard to separate and the weather cold and variable.

In every case a DE LAVAL separator, of suitable size, will surely at least save its cost between now and July 1st next, and go on returning 100 per cent. per year on the investment for twenty years to come.

The agricultural and particularly the dairying outlook was never brighter and more promising.

WHY NOT BUY NOW?

Send for Catalogue of 1908 Latest Improved Machines.

THE DE LAVAL SEPARATOR CO.

General Offices: 173-177 WILLIAM STREET MONTREAL
1213 & 1215 FILBERT ST. PHILADELPHIA
DRUM & SACRAMENTO STS. SAN FRANCISCO
74 CORTLANDT STREET, NEW YORK.
14 & 16 PRINCESS STREET WINNIPEG
107 FIRST STREET PORTLAND, OREG.

charred, with a rake you can scatter them so as to prevent their burning further and sprinkling a little salt over them they will be eaten up clean and relished by the hogs.

It forms an element in growth and strength of bone, as has been proved by tests at experiment stations. It also aids in neutralizing some of the gases that are found in the stomach and tends toward maintaining the health of the hogs. It proves a sort of a tonic and appetizer and results are always satisfactory. It is inexpensive and the hogs relish them like a piece of toast freshly buttered. If they did nothing else but supply the substance for the construction and strength of the bone it would be desirable, but as they are known to balance a ration to a certain extent, to tone up the appetite and help in the digestion, they should be supplied by every farmer who has the cobs.

Winter Course for Farmers at Ithaca.

There are five courses open to farmers' sons and daughters who are residents of New York State. Tuition is free and the travelling and living expenses in previous years have averaged between eighty and ninety dollars. The courses open at the

State College of Agriculture, Ithaca, N. Y., on December 3rd and run until February 24th.

In general agriculture, ten subjects are offered. The courses in dairying, animal husbandry and horticulture are specially designed for those who plan to make either of these branches their line of business. The course in home economics offered to farmers' daughters, provides instruction in cooking, furnishing, general house-keeping, home sanitation, reading, and the relation of the home to school, church and social features. It thus considers the home as the center of farm life.

Illustrated prospectus will be sent to all who write for it to the State College of Agriculture.

Along the Way.

A friendly smile, 'mid all the gloom
With which the world contends,
Is like a flower whose sweet perfume
With desert breezes blends.

A word of cheer, when dark despair
O'erawes the spirit frail,
Is like the welcome breath of air
That fills the fluttering sail.

A passing deed, in kindness done,
Lives on throughout the years;
In other hearts by kindness won
It ever reappears."

ABOUT CIDER.

Practically all there is in print in regard to cider making is from reports of observations of European methods, which have for their object the making of "Champagne Cider," which shall carry as small a per cent of alcohol as possible. These methods are similar to those used in making wine in regard to the measuring of the sugar content of the juice and the introduction of yeast. It is racked off at least more than once, usually several times, and care taken to exclude air from the juice. It is then bottled, preserved with some chemical reagent, and then charged with carbonic acid gas for preservation.

In recent years cold storage has been employed to keep cider in casks until a convenient time for bottling and selling. Great care is taken in the preparation of the casks and barrels which are always sulfured to destroy bacteria, rinsed carefully, and in the better grades of cider, absolutely pure water is used for rinsing. Special care is taken in filtering to remove all particles of fruit and secure an absolutely clear and pure cider.

In the United States there are a few concerns that put up this high-grade "Champagne Cider" for the wine trade.

Referring to the keeping of common cider for home consumption, I may say that the best means of having good cider is to make it, at intervals, of good winter apples, and not to attempt to keep it long after it is made.

Most Americans prefer the fruit flavor of its first fermentation, and it is practically impossible to keep cider in this condition for any length of time. A cold cellar or storage in ice house is about the only means of keeping cider in this condition for more than a few days. In some New England homes it is the practice to put oil of wintergreen or oil of sassafras in the barrels and to keep them in a cool cellar, and chemical preservatives are frequently employed. Most people prefer the fresh cider to that having the flavor of wintergreen or sassafras.

A Canadian Farm Creed. Good Enough to be American.

"We believe in large crops which leave the land better than they found it, making both the farm and farmer richer at once.

We believe that every farm should own a good farmer.

We believe the best fertilizer is a spirit of industry, enterprise and intelligence—without these, lime, gypsum and guano would be of little use.

We believe in good fences, good farm houses, good orchards and good children enough to gather the fruit.

We believe in a clean kitchen, a neat wife in it, a clean dairy and a clean conscience.

We believe asking a man's advice is not stooping, but of much benefit.

We believe that to keep a place for everything and everything in its place saves many a step, and is sure to lead to good tools and to keeping them in order.

We believe that kindness to stock, like good shelter, is a saving of food.

der.

We believe that it is a good thing to keep an eye on experiments, and note all, good and bad.

We believe it is a real good rule to sell grain when it is ready.

We believe in producing the best butter and cheese and marketing it when it is ready.

And we would add one more article on our own account: We believe in treating the hired man and the hired girl as though they were human beings.

New York State Dairymen's Association Meets December 8th to 11th at Utica.

This meeting will be devoted almost entirely to the consideration of bovine tuberculosis, what it is, what it means to the dairyman, to the milk consumer, to the creameryman, the cheese factory man, the physician, the State, and to the cow herself.

Details are being arranged by the president, Dr. W. H. Jordan, director of the State Experiment Station at Geneva, and Secretary T. E. Tiquin, of Sherburne. Noted men of this and other States will be on the programme.

The subject will probably receive more exhaustive treatment than ever before in a meeting of this character in this country. Granges, boards of health, medical societies and other organizations have been invited to send representatives, and already about 200 have arranged to do so. All persons who are interested are invited to attend the sessions.

We trust at least some of our readers will be present, and we would be glad to have your report of the meeting for publication. At least give us your opinion of the meeting or any particular paper or address that particularly interested you, and your im-

BLOODED STOCK for November.

pression, in your own words, of the whole meeting.

Bovine tuberculosis is a subject that vitally interests the farmer and dairyman, and this meeting will be an opportunity one does not often have to get at the bottom of the whole matter, by hearing men most capable of enlightening us.

Austria-Hungary is a land where agricultural co-operation has probably reached its highest development. Austria has 4300 co-operative credit banks, with deposits aggregating \$150,000,000, while in Hungary, in 1906, the number was 1814 with 453,929 members and a capital of about \$9,000,000.

At the close of 1904 the co-operative dairies in Hungary numbered 584, with about 50,000 members, and the number of egg societies was 264 at the close of 1906.

In no country in the world, it is said, is agricultural co-operation so completely developed, so systematically organized, and so accurately classified as in Austria-Hungary.

LET US TAN YOUR HIDE,

Whether Cow, Steer, Bull, or Horse Hide, Calf, Pig, Goat, or any kind of hide or skin, soft, light, and dress and mottled-proof for robes, rug, coat or gloves, and make them up when so ordered. But first get our illustrated catalog, with prices, shipping tags and instructions. We are the largest custom fur tanners of large wild and domestic animal skins in the world. Distance makes no difference whatever. Ship three square feet of horse hides together from anywhere, and Crosby takes the freight both ways. We sell fur coats and gloves, do taxidermy and head mounting.

The Crosby Fur Company,
Rochester, N. Y.



ONLY 50¢ PURITAN POULTRY REMEDIES



Diseases of the Digestive Organs, and Intestinal Troubles need not frighten the poultry-keeper nor send him running the first thing for the ax.

Many a fine fowl has been saved for further usefulness and profit to its owner, by the use of a simple remedy promptly administered.

We manufacture remedies for treating Cholera, Dysentery, Diarrhea, Bowel Complaint, Roup, Indigestion, and all the other ailments common to poultry.

THESE REMEDIES ARE SUCCESSFUL and accomplish effective work. Full and complete directions accompany every package, and if used according to directions, and promptly employed at the first sign of the trouble, we guarantee results, or refund your money. Puritan Poultry Remedies will cost you only 50c per vial, and may save you as many dollars by preventing the spread of infectious diseases among your birds. Sent prepaid on receipt of price.

Write for free circular containing valuable information on poultry diseases.

PURITAN AMERICAN POULTRY FOOD MFG. CO.,
Box 1615, New York, N. Y.

BLOODED STOCK for November.

President Roosevelt's "Farmers' Uplift" Commission Starts Out This Month.

The commission on country life, appointed by President Roosevelt, will leave Washington on November 9, and will visit several educational centres of the South for the purpose of obtaining information on the condition of Southern country life, whether anything needs to be done to improve it, and if so what it may be. It is proposed to hold hearings at agricultural colleges, so far as practicable, as these institutions provide effective organizations for securing the attendance of persons who are well qualified to express an opinion on country life questions.

In particular the commission invites the attendance at these hearings of representative farmers, teachers, business men, physicians and others who live in the open country or have direct relations with it.

The itinerary of the commission is as follows: College Park, Md., Nov. 9; Richmond, Va., Nov. 10; Raleigh, N. C., Nov. 11; Spartansburg, S. C., Nov. 12; Knoxville, Tenn., Nov. 13; Athens, Ga., Nov. 14; Lexington, Ky., Nov. 15.

The commission is composed of L. H. Bailey, chairman; Henry Wallace, H. L. Butterfield, Gifford Pynchot, Walter H. Page.

The matter is too fresh in our minds and too interesting for us to have forgotten the objects of the commission, as explained by the President.

How can the life of the farm family be made less solitary, fuller of opportunity, freer from drudgery, more comfortable, happier, and more attractive? How can life on the farm be kept on the highest level, and where it is not already on that level, to be so improved, dignified, and brightened as to awaken and keep alive the pride and loyalty of the farmer's boys and girls, of the farmer's wife, and of the farmer himself? How can a compelling desire to live on the farm be aroused in children who are born on the farm?

We hope the commission will be successful in breaking through the reserve that many a farmer may feel about taking on parts of his life that are really what the President wants to get at—not the ideas and pet theories of would-be reformers, but the actual conditions in daily life. Let the meetings be "heart to heart talks" and the results shown to be beneficial.

Feeding the Threshers.

Bake your pies and cakes the day before you are to thresh. Gather in all your vegetables and fruits, get them ready to put on the stove and put the vegetables in cold water. They will be fresher and more crisp than if gathered the day they are to be used. Cold slaw and potato salad can also be made the day before and set in a cool place. Grind the coffee the day before, allowing 1 tablespoonful to each person. When coffee is made have plenty of boiling water so that you can easily make a little more if needed.

Beef is the best meat to serve. Allow about a pound for each man

and a few pounds extra so you will be sure to have plenty. Put on vegetables early so they will have lots of time to cook. If done before you are ready for them set on back of range where they will keep hot. Boil your potatoes in the beef broth. Have the vegetables seasoned, cream in the pitchers, butter on plates, pie, cake and bread cut and set aside where it can be got quickly. Put a glass of water or milk at each plate. Lay aside all style. Have plenty of good, substantial food well cooked and seasoned.

Remember the Ladies on Threshing Day.

They have a pretty strenuous time of it. To have eight or ten hungry men come in upon one, often quite unexpectedly, is no slight burden. Try to have things ready as far as you can beforehand. Find out about when the men will come, and get provisions accordingly. Another thing: Where the men stay all night it is a good idea to invite them to wash up before going to bed; and if you can furnish them with night shirts it will save a lot of hard work washing bedclothes.

YOU SHOULD KNOW the STRONG FEATURES of I-H-C MANURE SPREADERS

THEY are great money-making machines. If you will do a little figuring you will see that you could make no wiser investment. An I. H. C. spreader will make manure go twice as far. That is proven by every user. The immediate benefit to the crop is greater and so is the permanent benefit to the land. If you have manure to the value of \$100 a year when spread by hand, it will be worth at least \$200 when spread with an I. H. C. spreader. That gain will very nearly pay for your spreader. That is only one year's gain. Your I. H. C. spreader is good for many years. It will put the \$100 of extra fertility into your soil every year. The fertility of your land is brought up and maintained because the machine does the work so much better and makes the manure go so much further than when spread by hand. Can you make a better investment? Any I. H. C. spreader will be a money-maker for you. Made in three styles:

"Cloverleaf"—Endless Apron Spreader
"Corn King"—Return Apron Spreader
"Kemp 20th Century"—Return Apron Spreader

They are all strong, durable machines, easily handled, light in draft.

You are losing money every year by not getting all the value out of your manure pile.

An I. H. C. spreader will stop this loss. Take the matter up with the International local agent who handles any of these lines and see about buying a spreader. He will supply you with catalogs and all particulars. Or if you prefer, write direct to

International Harvester Company of America, Chicago, U. S. A. (Incorporated)

Be Up With the Times.

The farmer who thinks he can "farm it" year after year without studying new methods simply is fooling himself. Times are changing and changing fast. Lie down and take a snooze for one year, and the tail end of the procession will be clear out of sight when you wake up.

There are many things one need never know, but we have sense enough to discern them a long way



National Field and Hog Fence

gives best service, lasts longest, causes no trouble. Don't buy a fence until you have written about this, our RANGER HUMANE M. M. S. Poultry Fence, Steel Web Picket Fence, or RANGER Barbed Wire. Tell us what you require and we will name you special delivered prices.

REVOLVING BARB WIRE
DeKalb Fence Co., DeKalb, Ill. Kansas City, Mo.



Chicago, Union Stock Yards, November 2.—Corn belt feeders are unanimous in one thing at this time, namely, not to feed any more corn than is absolutely necessary. Evidence certainly is not lacking of this, a trip over the Yards disclosing the fact that warmed-up cattle, pigs and light-weight swine and short-fed lambs comprise a liberal proportion of the daily receipts here these days. And this is one of the potent factors in buyers being able to dominate the markets.

Average Weight of Hogs Light.

The rush of pigs and half-fat swine to market continues. In fact, it is more marked than in years. The fear that it will not pay to mature hogs on this year's crop of corn is the prime factor in this unusual market condition. During the second week in October the average weight of the hogs received at Chicago was only 208 lbs., the lightest on record for October, as light as any week since February, 1905, and 32 lbs. lighter than the corresponding week of last year. The general average weight of the hogs received at the six leading western markets in September was 210 lbs. against 247 lbs. for the corresponding month of last year. Kansas City hogs were the lightest at 189 lbs., and Sioux City the heaviest at 232 lbs. There is surely something in the claim that the lard production during the last six months of 1908 will be the lightest in years, and that the 250 to 350-lb hogs will command a big premium on the light weights before many more weeks.

East Marketing Hogs Fast.

Marketing of the eastern crop of hogs has been at an unusually swift gait during the past two months. The movement started one month earlier than usual, and there is promise that it will stop that much sooner. Just when the breaking off of the run will come it is not possible to say. But it is not logical to expect that the enormous liquidation will continue much longer. When it does cease, then the East will have to come to Chicago for supplies. This would mean sharp competition for swine averaging around 250 lbs and heavier. Then will local packers' domination of the trade cease, and a sharp advance in prices ensue.

Brighter Prospects for Cattle.

There are better times in store for the cattle market. Supplies from the

northwest ranges are falling off fast, and it will not be long before these offerings will come in such scant numbers that they will not cut much figure in the general trade. Then the buyers will have to depend upon the natives. That current prices will be materially improved upon before long is conceded by even the slaughterers. Scarcity of choice finished beefs is quite apparent, and this will create broader demand for those in less desirable flesh. There are indications that more half fat cattle will be marketed during the next two months, or more than in any like period in years, the feeders being in no mood to put cattle in unished condition owing to the high price of corn. Of course, this can result in hardly any other than a big shortage of ripe grades, and the probability is that some very high prices will be recorded.

Keep Half-fat Cattle Back.

Steers in plain and medium flesh lately have been striking new lower

price levels for the year. Excessive runs of these and buyers' marked partiality for the western rangers are proving the downfall of the trade in such native stock. It is time that the feeders take a second breath and make a move against the crowd. Corn is gradually working to a lower level, and a shortage of good, fat beefs is staring the buyers in the face, and, unless all signs go wrong, some high prices will ensue. With these probable conditions in mind we advise the further feeding of good qualified 1,000 to 1,300-lb. steers for 60 to 90 days and similar grades of 1,200 to 1,300-lb. steers for 30 days.

Half-fat Sheep Poor Sale.

Both western sheep and lambs that were taken out earlier in the season are being returned to market in half-fat condition in no small numbers by those whose pastures have played out and who wish to avoid feeding corn. In view of the fact that such stock in most instances is shunned by the slaughterers, and subsequently has to

Prize Winning R. C. Rhode Island Reds



Winners at
Jamestown
St. Louis
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Stock for Sale

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Oxford, Pa.

be resorted and sold on feeding account, it does seem that shipping these where feed can be secured is a mighty poor plan. A few weeks' more feeding would lift them out of the feeder class and attract bids from the packer buyers. It will not be very long before there is a let-up in the burdensome receipts of native offerings, and then fat-fed westerns should come into their own. This is surely not a time for the feeders to crowd the market with a class of stock only suitable for return to the country. More confidence in the future and keeping half-fat offerings back in the country would likely bring about the desired results for the feeders.

Run of Hogs Increases.

Reference to receipts of cattle, hogs, and sheep in October, discloses some unusual conditions. The total for cattle, amounting to 287,000, was the smallest for October since 1900. Receipts of sheep were also the smallest since the same year, and hogs were the largest since the same month of 1900. Compared with October last year receipts of cattle show a decrease of 81,000, all of which was in the western range department. In fact, receipts of native steers were about 7,000 larger this month than for October of last year. In October, 1907, 160,000 western range cattle were received, while last month the total was only 71,000.

Few Cattle Above \$7.00.

In the cattle department the top for October was \$7.60, which point was reached several times, though the quality was so poor that there were not many cattle good enough to sell above \$7.00 and a very large percentage sold at \$4.00 to \$5.50, with inferior down to \$3.50. Butcher stock held up fairly well, because of the light supply of range cows and heifers.

Hogs closed in October just a dollar lower than at the opening. The highest price early in October was \$7.20, and \$5.85 was the top at the lowest point.

In the sheep department the demand was very spasmodic and irregular in October. Fluctuations were wide and wild, at times being regulated largely by conditions in the East. Top for lambs for the month was \$6.65, but the great bulk of the lambs sold at \$5.40 to \$6.40. Feeding lambs sold readily at \$4.50 to \$5.50, demand being good and material scarce, with bulk of mutton sheep at \$3.75 to \$4.50.

An "Every Day" Harrow.

The Cutaway Harrow leaves the land loose, mellow, open, ready to draw in moisture and retain it for the plant roots. Many a farmer discards his stubble and laid-over land, knowing he will add many a bushel to next year's crops. A subscriber recommends for all around work the harrow with the 16-inch disc, because it revolves often and pulverizes the soil more rapidly and more thoroughly than a large size. The Cutaway people make 120 sizes and styles, in widths from two feet to sixteen, for every imaginable use cutting down stalks, cutting up sod land before plowing, reducing clods to powder, covering peas, beans, grain, etc.

A Cutaway Disc Harrow will cut and break the toughest sod without the help of a plow.

Write to the Cutaway Harrow Company, Higganum, Conn., for their Free Catalogue, as per advertisement in this issue, and kindly mention Blooded Stock when doing so.

MONEY WILL STRETCH

At least it will go further if spent in the right place. 50 PER CENT SAVED BY OUR BIG OFFERS. We can stretch your money and save you a full 50 per cent. LOOK! Here are the most remarkable bargains in Magazine Clubs ever offered.

SPECIAL OFFERS		BIG BARGAIN CLUBS.	
Regular Price Per Year		Regular Price Per Year	
Cosmopolitan	\$1.50	Smart Set	\$3.00
Pearson's	1.50	Pearson's	1.50
Total	\$3.00	Woman's National Daily	1.00
OUR PRICE \$1.50		Total	\$5.50
Regular Price Per Year		Regular Price Per Year	
Cosmopolitan	\$1.00	World's Work	\$1.50
Designer	.50	McClure's	1.50
Total	\$1.50	Woman's Home Companion	1.00
OUR PRICE \$1.25		Total	\$4.00
Regular Price Per Year		Regular Price Per Year	
Pearson's	\$1.50	Cosmopolitan	\$1.00
Paris Modes	.50	Review of Reviews	3.00
Woman's National Daily	1.00	The World Today	1.50
Total	\$3.00	Total	\$5.00
OUR PRICE \$1.50		OUR PRICE \$3.00	
Metropolitan, Sunset or Bohemian can be substituted for Pearson's in this Club.		Regular Price Per Year	
Regular Price Per Year		Everybody's	\$1.50
Woman's National Daily	\$1.00	Delineator	1.00
Paris Modes	.50	Total	\$2.50
National Home Journal	.50	OUR PRICE \$2.00	
Total	\$2.00	Regular Price Per Year	
OUR PRICE \$1.00		American Magazine	\$1.00
Regular Price Per Year		Cosmopolitan	1.00
Outing	\$3.00	Total	\$2.00
Sunset	1.50	OUR PRICE \$1.65	
Total	\$4.50	Regular Price Per Year	
OUR PRICE \$2.25		Outing	\$3.00
Regular Price Per Year		Success	1.00
Pearson's	\$1.50	Cosmopolitan	1.00
Metropolitan	1.50	Total	\$5.00
Sunset	1.50	OUR PRICE \$2.50	
Bohemian	1.50	Regular Price Per Year	
Total	\$6.00	Outing	\$3.00
OUR PRICE \$3.00		Success	1.00
Outing or Smart Set can be included in any of above clubs at \$1.50. Any two \$1.50 magazines in above clubs will be sent to one or different addresses for only \$1.50.		Total	\$4.00
Paris Modes, the greatest woman's magazine in the world, will be sent to any address one year for only 25c.		OUR PRICE \$2.00	
BIG BARGAIN PRICES ON Single Yearly Subscriptions		Regular Price Per Year	
Regular Price		National Home Journal	\$.50
Outing	\$3.00	Paris Modes	.50
Bohemian	1.50	Total	\$1.00
Pearson's	1.50	OUR PRICE 50c	
Smart Set	3.00	Paris Modes, the greatest woman's magazine in the world, will be sent to any address one year for only 25c.	
Paris Modes	.50	Always remit by Express, P. O. Order or by Registered Mail. On personal checks, always 10c for exchange.	
National Home Journal	.50	If you are already a subscriber to any or all of these magazines your subscription will be extended one year.	
Woman's National Daily	1.00	These offers are good to old as well as new subscribers.	
We always acknowledge every order. This is very seldom done by any other agency.		If you don't want all of the magazines sent to one address, you can split the club and have them sent to any number of different addresses.	
IF YOU DON'T FIND ALL the publications you desire, in this list, send us your full list and we will show you a large saving by return mail.		Be sure and send for our big Bargain Catalogue. It is sent free to any address.	
If you change your address your magazine can be changed from old to new address.		Reference—North Memphis Savings Bank, Memphis; or any business house in Memphis, or any magazine in our Clubs.	
ALWAYS ORDER CLUB BY NAME, AND SEND ALL ORDERS DIRECT TO		Always mention the name of the publication in which you saw this offer.	

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WE WANT AGENTS AND REPRESENTATIVES in every city, town and village in the United States to take subscriptions to our clubs. We have many who are earning large sums of money each month.

Do You Want a Chance to More Than Double Your Money

**WRITE US TODAY FOR FULL
PARTICULARS**

**Big Fortunes are Being
Made Every Day in
Minnesota Iron Mines**



And these fortunes are brought within the reach of the small investor—the person with from \$10 to \$100 or more to invest—as well as the one who has his thousands for speculation.

Farmers, merchants, clerks and office people are putting their spare money into Minnesota Iron Mines and are making big dividends on their savings. Our company makes this possible for the small investor.

No one need hesitate, because he has only a few dollars to spare. His few dollars will entitle him to share in the big profits that are almost a certainty.

One company in Northern Minnesota earned its stockholders \$1,500,000.00 in dividends this year. Our lands promise as great and as rich a yield of ore. If that promise is realized your investment will return you a rich harvest. This is the opportunity of a life-time for the small investor.

Ten dollars—the price of a share—puts you on the same footing in this company as the President and every other stockholder and will return you exactly the same rate of profit.

This company is incorporated for \$150,000.00 and owns land in the very heart of the richest ore belt in Minnesota. Its purpose is to acquire and develop Iron Lands for profit.

Back of your investment, and as a guarantee against loss, is the lands owned by the company. Most of these ore companies only lease the lands they mine. We own our lands and believe the “big money” for us will come from developing the mines ourselves.

A short distance North of our property a prominent

ore company has sunk a shaft and is now mining. In every direction drills have disclosed valuable finds of iron ore. Within 80 rods of our land drills have blocked out forty million tons of iron ore. The above ore company referred to has offered to supply us with money and take half the profits. We prefer, however, to develop it ourselves and divide the profits among those who invest with us and help develop this valuable land. Consequently, we believe this will be an excellent opportunity for you to receive good dividends on your investments.

This is the chance of a life-time for you to safely put a few dollars to work in a way that promises phenomenal returns.

A SAFE INVESTMENT FOR THE SMALL INVESTOR

The tales of the wealth Minnesota Iron Mines are putting into the pockets of the people who have been far-sighted enough and invested in and helped

develop them, sound like fairy stories—but the facts are that the truth, **if all told**, would stagger belief. One dollar invested has jumped to \$140, and so on. True not every one is so lucky—while most of these who have not been so fortunate have been the ones who were too impatient to wait and sold out just before the fortune came. Good things are worth waiting for.

If you want to know more about our company and what it offers you in the way of a safe speculative investment, write today for our **free** illustrated prospectus, full of facts and figures that will open your eyes as to how some men got to be “Iron Kings.” The same opportunities are open to you. **Get the facts**—it won't cost you anything to learn what the Iron Mines of Minnesota have done for the people who had the nerve to put their money into developing companies and help dig the ore out of the ground. Be sure to write today.

IRON PRODUCING LANDS CO.,
846 Bank of Commerce Bldg., Minneapolis, Minn.

**End of
Volume**